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ABSTRACT

A study examined the effects of increased academic requirements for high school graduation on enrollment trends in public secondary vocational education programs in Washington since 1983. Vocational directors of 211 school districts that had increased graduation requirements since 1983 were surveyed through questionnaires. Results indicated that although high schools varied in the number of requirements for graduation, adequate time was available for taking vocational education subjects. Over 36 percent of the time remaining during the high school years could be devoted to elective options outside of the core requirements. Cross-crediting was evident in nearly 66 percent of the school districts. Where academic classes, enrollment, or expansion increased, 40 percent of the school districts also experienced decreases in vocational program enrollments. When enrollment did increase in both academic and vocational areas, more teachers were hired. However, hirings were in the proportion of three academic teachers to one vocational teacher. All academic areas had large increases in student enrollment. Business and office education showed an extremely high increase in student enrollment, but home and family life and agriculture had a decrease in course offerings. (The survey instrument and correspondence are appended.) (YLB)

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THE EFFECTS OF INCREASED ACADEMIC REQUIREMENTS FOR GRADUATION ON SECONDARY VOCATIONAL EDUCATION PROGRAMS

By

Wendy M. Smith

A dissertation submitted in partial fulfillment
of the requirements for the degree of

Doctor of Education, Ed.D.

in

Vocational Education

Secondary, Postsecondary, and Vocational Education Department
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May, 1987

Abstract

The Effects of Increased Academic Requirements for Graduation on Secondary Vocational Education Programs

This study examined the effects of increased academic requirements for graduation on secondary vocational education programs in Washington since 1983. Each of the 211 school districts meeting the criteria for inclusion in the study were surveyed with a questionnaire. Instruments were administered to the vocational directors of each of the identified school districts. The questions asked on the questionnaire were designed to solicit data on: (1) the total number of units required for graduation, (2) the total number of general education units required for graduation, (3) the kind of classes allowed for both general and vocational education (dual credit), (4) the number of academic and vocational classes offered which represented increases, decreases, or no changes in graduation requirements, (5) the number of enrollments by which academic or vocational programs increased, decreased, or showed no change and (6) the degree to which student demand or interest increased, decreased, or showed no change in academic and vocational programs. Finally, implications and recommendations were offered based on the responses from the questionnaires. Strategies for increasing overall academic standards without causing negative effects in vocational education programs were suggested.

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CHAPTER I

THE PROBLEM

Introduction to the Problem

Recently, considerable attention has been refocused upon public secondary education in the United States. One primary reason for this attention has been the publication of numerous federal reports by prestigious groups who called for reform and improvement in education. A Nation at Risk (1983), The Carnegie Report (1983), Academic Preparation for College (1983), The Paideia Proposal (1982), Tomorrow's Teachers (1986) and What Works (1986) are among those that have received considerable attention.

One consistent recommendation of these reports has been to "strengthen" the academic requirements of public high schools and training institutions. Although no specific recommendations have been made to reduce or eliminate vocational education, by implication this "back to the basics" movement would undoubtedly have a major impact on secondary vocational education programs across the United States since there would not be room in the curriculum or in the schedules of individual students to accommodate both.

School districts in most states have responded to this call toward reform by increasing the number of academic

courses required for high school graduation. The underlying assumption made by most authors of these studies was that the addition of more basic academic courses would be the most appropriate way to prepare all students for life. However, according to one of the most recently published reports, The Unfinished Agenda (1985), this assumption was faulty. The report stated,

> The response by the states has some merit--it does show a strong commitment to improving the quality of education received by students in secondary schools. However, it ignores differences in students' interests and abilities, and it ignores the needs of those high school students who do not plan to go to college and who purposefully choose a vocational program (p. 1).

The National Commission on Vocational Education which authored The Unfinished Agenda (1985) stated that (1) more academic requirements constrain students' access to vocational education and thus was not necessarily the best preparation for life, (2) eighty percent of jobs in America do not require a college degree and (3) advocates of vocational education have traditionally also been advocates of basic academic skills.

Ferqueron (1984) contended that the increase in required courses may deny students a vocational track because they have fewer electives. He was apprehensive that school personnel may not be given sufficient time to

develop plans to substitute vocational courses for academic requirements.

Contemporary school reforms involved the issue of what constituted a proper education for today's technological society. Within business and industry, two apparently contradictory factions have emerged. One group emphasized vocational education, career education and basic skills; the other emphasized a strengthened liberal arts curriculum. Both advocated, ultimately, specialized knowledge as well as employability skills.

Silberman (1984) believed that increasing academic requirements would not, by itself, solve the quality issue--more was not necessarily better. He affirmed that vocational education was an essential part of general education and advocated activities from which students can acquire general technical skills that were applicable in a wide range of occupations. All students needed a balanced mix of both academic and vocational experiences in a common core curriculum (p. 27).

Purpose of the Study

The purpose of this study was to determine the effects of increased academic (general education) requirements for high school graduation on enrollment trends in public secondary vocational education programs. Only those school districts in the state of Washington that had increased

graduation requirements since 1983 were included in the study.

Questions

The following questions served as a basis for the collection and analysis of data.

1. What were the differences between three-year (senior high schools) and four-year (traditional) high schools in terms of their graduation requirements?
2. What were the number of units available for electives after academic requirements were fulfilled in the school districts surveyed?
3. Were there courses in both academic (general education) and vocational education areas that fulfilled graduation requirements offered?
4. Had the number of academic and vocational classes offered in these school districts changed since 1983?
5. Had the number and proportion of enrollments in academic and vocational courses/programs changed since 1983? How had this affected the number of teachers employed in these areas?
6. Had the number of graduation requirements changed since 1983? How had this affected the number of electives available?

Significance of the Study

Evidence has shown that vocational education has a place in secondary schools because it creates what Berryman (1979) called a "niche" for students who might otherwise become discouraged and drop out of school.

West (1985) stated specific information was needed on the various matriculation patterns by students and the characteristics of students with different patterns. Analyzed properly, this information may provide a basis for policy decisions concerning the future direction of secondary school curricula.

The National Commission on Secondary Vocational Education in its report, The Unfinished Agenda, (1985) explicitly stated that school districts should thoroughly study the likely impact of curricular change on all types of students and its effect on enrollment in "elective" courses prior to increasing their academic (general education) requirements for graduation.

The ASCD Task Force found in their report, (With Consequences for All, 1985) that increased graduation requirements brought about both negative and positive results. The report called on the profession to closely monitor, document and evaluate the actual consequences for students and teachers and accurately relay these findings to parents and legislators to ensure that future policy changes would be enacted with wisdom by an informed public.

The Delaware State Department of Public Instruction (1985) recommended in its report (Applying the Academics: A Task for Vocational Education) that appropriate educational agencies supported the conduct of a state-wide assessment of enrollment trends in vocational education programs. It advocated that recommendations for improvement be made if indicated by the data. It specifically speculated that there might be problems in basic skills courses due to increased graduation requirements.

Premises

The first premise underlying this research was that it would provide information having implications for establishing that there had been increased academic requirements which would allow speculation that this could result in an adverse impact on public secondary students' capacity to successfully enter the world of work upon graduation. David (1983) stated that vocational education provides an alternative course of study for those not intending to go to college, contributes to more equal opportunities and provides students with the knowledge and skills needed to take and hold entry-level jobs. Many basic occupational skills have been taught in secondary level vocational programs. Therefore, high school students who are not interested in pursuing a college education when

they graduate from high school may be at a distinct disadvantage in trying to find entry-level employment. However, with the increase of academic requirements for graduation slowly removing elective options, students may not have the choice of selecting vocational classes. Rather, all students may be forced to take academic classes regardless of their aspirations upon graduation.

Secondly, since all students have the right to have their educational needs met, it would seem that secondary school offerings that include opportunities for vocational education are to be fostered. Excellence should be balanced with equity. Vocational education has been an important part of the secondary school curriculum, even though it was often criticized for not keeping pace with new technology and for not being rigorous enough. New strategies should be devised if vocational educators are to be successful in proposing cross crediting of their curriculum to meet graduation requirements.

Thirdly, it was predicted that more than likely the results of this study would show a decline of enrollment in most secondary vocational education programs in the state of Washington accompanying the anticipated increased academic (general education) requirements. Such increases would leave little room for electives including vocational offerings. Thus, it was expected that new directions and practices in vocational education would be necessary. The

present study was expected to set the stage for several speculative suggestions along these lines. For example, one alternative could be to increase academic requirements for graduation while not affecting the enrollment of secondary vocational education programs. This could be accomplished by changes in scheduling patterns, articulation agreements with postsecondary institutions or by lengthening the number of periods in a school day.

School districts have other options for maintaining vocational education such as letting students utilize specific vocational courses in meeting general education (academic) requirements for graduation. These courses usually contained sufficient components in only science, mathematics or language arts to meet the specific graduation requirement for those academic areas.

It was anticipated that the study would provide preliminary support for advocates who wish to reorganize secondary vocational education programs. While future studies would be needed to examine the demographics of the state and determine how each of the rural and remote areas had been affected by the state requirements for increasing graduation requirements, the present study was expected to provide initial data indicating directions.

Delimitations

The present survey research was restricted to secondary school districts in the state of Washington that

had increased their academic requirements for graduation since 1983.

A second delimitation of the study related to the self-developed instrument distributed to the school districts. Only the data elicited by the form were available for analysis. The reliability and validity of the questionnaire was a function of field testing utilizing a group of experts in vocational education in the states of Nevada and Oregon.

Another factor beyond control was introduced by requesting that only the vocational directors or the administrator responsible for vocational education in those identified school districts complete the questionnaire. These school officers may have simply instructed their assistant or secretary to complete the factual data of the form. If this occurred, it could conceivably have negatively impacted the number and completeness of questionnaires received and the accuracy of data.

Method, Plan, Design of Research

The first step in the study was to survey the literature to determine the need for conducting research in this area. Next, a questionnaire was developed and the draft of the questionnaire was distributed to a group of authorities in vocational education for review and criticism. The instrument was revised according to the

suggestions of these experts and distributed a second time to the same population group for a final critique and revision.

The questionnaire, when finalized, was distributed to the vocational directors in school districts in the state of Washington who had increased their academic requirements for graduation since 1983. Various follow-up contacts were made until a 72 percent level of return of the survey was attained.

Next, the completed questionnaires that were returned were tabulated and categorized into two groups: (1) three-year high schools and (2) four-year high schools. Finally, the data was analyzed by applying descriptive statistical techniques to the respondents' answers.

Definitions of Terms

Since the terms used in vocational education are often unique to the area, the key terms employed in this paper were defined:

Increase in academic requirements for graduation: Additional units that have been added to the list of high school requirements (since 1983) in specific specialization areas in order for a student to qualify for graduation in the state of Washington. Graduation requirements were specifications of minimum educational achievement and other

qualifications necessary for the granting of a diploma by the high school (Good, 1973, p. 264).

Negative effects: For the purposes of this study, negative effects on secondary vocational education programs were identified by (1) a decrease in the number of vocational classes offered, (2) a decline in the total enrollment in vocational programs and/or (3) a decrease in student demand or interest in vocational programs.

Academic classes: The fields of English, foreign languages, social sciences, mathematics and sciences made up the academic requirements (Good, 1973, p. 3). These classes were identified as "any course" that was not taught in the vocational program. Typically these courses would include such content as Physical Education, Basic English and Physics.

Vocational classes: Courses in vocational education that were in a program of education organized to prepare the learner for entrance into a particular chosen vocation or to upgrade employed workers. Training or retraining (including field or laboratory work incidental thereto) was given in schools or classes under public supervision and control or under contract with a state board or local educational agency (Good, 1973, p. 645).

Such classes were categorized in the divisions of (1) trade and industrial education, (2) health education, (3) agricultural education, (4) business and office education,

(5) distributive education, (6) occupational home economics, (7) technical education and (8) vocational consumer/home and family life education (Dejnozka, 1983, p. 173).

Public high school secondary vocational education: Public high schools were identified as those supported and controlled by the people, nonsectarian, open to all and made no tuition charges (Good, 1973, p. 282). Secondary education was a level of education planned especially for young people of ages approximately 12 to 17, which embraced grades 10-12 or 9-12 in which the emphasis tended to shift from mastery of basic skills for learning, expression and understanding to the acquisition, use and extension of knowledge in the liberal and applied arts. Experiences in exploring and acquiring information, concepts, intellectual skills, attitudes, social, physical and intellectual ideals, and habits, understandings and appreciations were involved and often differentiated in varying degrees according to the needs and interests of the pupils; could be either terminal or preparatory (Good, 1973, p. 522). Vocational education was the specific component of secondary education that prepared one for the world of work (i.e., skilled, semi-skilled trades or occupations) (Dejnozka, 1983, p. 173).

Vocational Education Act of 1963: Federal legislation designed to (a) extend present programs and

develop new programs of vocational education, (b) encourage research and experimentation and (c) provide work-study programs to enable youth to continue vocational education (Good, 1973, p. 645).

Vocational directors: The administrative head of a program of vocational education; presumably had technical training in the field and supervised other personnel teaching and administering vocational education classes and programs (Good, 1973, p. 185).

Building administrator: The individual responsible for directing and controlling the activities of a school (Dejnozka, 1983, p. 7).

The Unfinished Agenda: The National Commission on Secondary Vocational Education prepared this report (The Unfinished Agenda, 1985) which focused on the improvement of quality and responsiveness of secondary vocational education offerings to meet diverse student needs and interest.

Cross crediting and/or dual crediting: This was a relatively new concept and prevalent in many school districts. A class that could be cross credited in the school curriculum could receive either academic or vocational credit to satisfy a requirement for graduation. Anderson & Brouillette (1985) identified these school districts who let students utilize specific vocational courses that contain sufficient components in either

science, math, communication or other academic areas to meet specific graduation requirements in that academic area.

Organization of the Study

Chapter I was an introduction to the study of increased academic requirements for graduation and the effects on secondary vocational education program enrollment. It contained an overview of the problem; a statement of the problem, enunciation of the purpose of the study, questions which were posed, the significance of the study, the premises, delimitations, a brief description of the plan for the study and operational definitions of key terms.

Chapter II provided a review of the literature related to the study. This chapter was divided into five sections with a summary of the literature reviewed in each area. This chapter examined the nature of vocational education which is followed by: (1) reviews of the history of vocational education since 1917, (2) the reform movement of the '80's, (3) a justification of secondary vocational education, (4) the importance of partnership between academic and vocational education at the secondary level and (5) a synthesis of the literature reviewed.

Chapter III presented the methods and procedures used in the study. The selection and description of the subjects were presented along with the instrument used.

Chapter IV included a collection and analysis of the data received from the questionnaire survey research conducted.

Chapter V contained a review of the problem and the possible findings, the recommendations and the recommendations for further study in this area.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

> The antithesis between a technical and liberal education was fallacious. There can be no adequate technical education which is not liberal, and no liberal education which is not technical: that is, no education which does not impart both technique and intellectual vision. In simpler language, education can turn out the pupil with something he knows well and something he does well. This intimate union of practice and theory aids both. The intellect does not work best in a vacuum (Whitehead, 1929).

No aspect of United States education has probably been less well understood than vocational education (Bottoms & Copa, 1983). When vocational education was first informally introduced by John Dewey, a progressivist and major critic of the dual school system (Hillison & Camp, 1985), the intent was to address the training needs of the labor market and to help the student "by extracting at each present time the full meaning of each present experience" (Dewey, 1968).

When the mass training of workers became a major objective of public education, vocational education developed more rapidly in America than any other educational movement in its history (Prosser & Quigley, 1949). Traditionally, vocational education had been defined as

those activities supported by the federal vocational education acts that provided for the development of the knowledge, skills, and attitudes needed in occupations requiring less than a baccalaureate degree (Taylor, 1982).

Vocational education, a voluntary program, has operated as a federal, state, and local partnership funded mainly by the states and local communities. The federal government contributed much less than did the states and local communities, but federal funding strongly influenced the planning and policies of state and local secondary vocational education programs (Starr et al., 1983).

The fundamental purpose of vocational education, at least from the federal perspective, has been to prepare individuals for gainful employment (Nunez, 1982). Vocational education has not been a single, uniform system with identical programs, operating throughout the country, but rather a collection of uniquely different state systems, each responding to a diversity of state and local community needs (Taylor, 1982).

Since 1963, the history of federal vocational education legislation suggests that it has taken four educational roles upon itself in preparing students for employment. These four educational roles have been: (1) occupational skills development, (2) employability skills development, (3) the provision of work experience and (4) the responsibility for placing students in training-related jobs

(Starr et al., 1983). A fifth role for vocational education, basic skills development, has emerged more recently--partly in response to a national concern about actual and potential shortages of skilled industrially oriented craftsworkers and technicians in the 1980's and beyond (Starr, 1980).

Benevot (1983) described the intent of vocational education as being aimed at meeting the demands for a technically-proficient labor force. From this he identified two educational trends that conditioned the institutionalization of secondary vocational education. The focus and original purpose of vocational education was: (1) the general expansion and differentiation of secondary schooling and (2) the formalization and incorporation of particularistic vocational courses and apprenticeship programs into public schools.

The following reviews of literature have addressed (1) the history of vocational education since 1917, (2) the effects of the reform movement since 1983, (3) the justification of secondary vocational education programs and (4) the importance of a working partnership between academic and vocational education. This chapter concludes with a synthesis of the literature reviewed.

History of Vocational Education Since 1917

The Smith-Hughes Act of 1917 paved the way for the federal funding and support of vocational education in the

United States (Kantor & Tyack, 1982) and began to provide the groundwork for a new kind of practical and applicable learning. This Act was designed to develop cooperation between the Federal Government and the states in which the industrial community played an instrumental role in the development of it (Wade, 1984). The Smith-Hughes Act of 1917 was recognized as the formal initiation of vocational education into the public school system (Taylor, 1982).

The original federal support for programs at the secondary level, the Smith-Hughes Act of 1917, had two main purposes: provide a more meaningful education for those young people who did not plan to continue their education after high school, and met the needs of the labor force for particular skills (Mertens et al., 1980).

Federal policy helped to shape secondary vocational education since the first legislation in 1917. At that time, programs were designed for students not well served by a college-oriented academic program (Hughes, 1984). Federal funds were made available to stimulate and assist the states in making adequate provisions for vocational training. Ever since this introduction, vocational education has played a significant role in the lives of secondary students.

The next succeeding piece of landmark legislation for vocational education program improvement was the Vocational Education Act of 1963. Whereas in 1917 a limited number of program areas were funded, the 1963 law was designed to

serve students in whatever vocational programs or courses were appropriate. This Act represented major new directions in educational, economic and social policy (Taylor, 1982). It contained broad provisions for research and training, as well as experimental and demonstration or pilot programs. Funding authorized under this legislation was appropriated by Congress and allocated by the Commissioner of Education for institutional capacity building and for such priorities as program evaluation, resource development, vocational guidance and career choice, organization and administration and new careers (Budke, 1983).

The new purpose of vocational education embedded in this act was to maintain, extend and improve vocational education so people of all ages in all communities had equal access to and opportunity for high-quality training and re-training that would be congruent with labor market opportunities and student needs, interests and abilities. The act also appropriated monies for (1) construction of area vocational centers; (2) in-service and pre-service teacher training; and (3) other program improvement services, such as research and development (Taylor, 1982).

Following this legislative enactment were the Amendments of 1968. They authorized support of grants for research, training, exemplary programs and curriculum development. A part of the research and exemplary programs was to be administered at the state level. The 1968

Amendments expanded vocational education to provide equal opportunities for enrollment of even larger segments of the population (Taylor, 1982).

This Act was subsequently followed by the Education Amendments of 1976 which responded to many of the concerns raised about vocational education research and development (Budke, 1983). The 1976 Vocational Education Amendments brought about no significant changes in the goals of Federal policy, but they did expand the emphasis on methods to be used in implementing the Federal objectives. The purpose of the act was altered to read "extend, improve, and where necessary maintain," hence the new emphasis was on extending and improving (Taylor, 1982).

Beginning in 1963 and continuing through the 1976 legislation, the Federal role provided increasingly for populations with special needs, for populations in economically depressed areas, for sex equity and for a variety of support services such as research. Policy questions addressed which of these continued as priorities at the secondary level and which others, if any, would be added (Hughes, 1984).

The 1963 Act, and its subsequent Amendments, added a broader set of social goals and brought about major social policy changes in the administration of vocational education and increases in Federal monies to implement these changes (Taylor, 1982). Among their purpose was to serve

disadvantaged and handicapped individuals and eliminate sex stereotyping in occupations (Mertens et al., 1980).

The final and most direct legislative impact on vocational education took place in 1984. The passage of the Carl Perkins Vocational Education Act, was passed three years after it was originally scheduled for consideration, and those three years witnessed a continuing debate over the performance of vocational education and the Federal interest in it. When the Carl D. Perkins Vocational Education Act was passed in 1984, it was heralded as representing potentially one of the major vehicles of influence in vocational education for most of the remainder of this century (Lewis et al., 1985).

This new legislation narrowed and focused the Federal role which emphasized program improvement and provided services to populations with special needs. The Act recognized and attempted to respond to structural changes the economy was undergoing and to guide efforts at educational improvement (Lewis et al., 1985).

The Perkins Act incorporated provisions designed to deal with other major factors that influenced the environment of vocational education: an emphasis on increasing the quality of all education, and the structural and technological changes in the American economy. Lewis et al. (1985) said this was the first time that enhanced

academic skills had been explicitly stated as a purpose of vocational education in Federal legislation.

The Reform Movement of the '80's

The original intentions and goals of vocational education are recently being subverted because of growing concern about excellence in education and the perception of a "rising tide of mediocrity" (National Commission on Secondary Vocational Education, 1985). The national reports that have been published since 1983 had come in a time of widespread recognition that improvement in academic standards at all levels is imperative.

Reformers have vowed to bring up the next generation of American youth by a tougher, more rigid set of standards, applied to each and every one of them in a similar fashion. However, Wade (1984) has cautioned that burgeoning reform in the educational community required tender nurturing to assure "excellence" as a replacement for the so called "tide of mediocrity."

The reform movement, whether it has been addressed to the new math, new English or new social studies, has at least two crucial unknowns as identified by Hruska (1974): (1) the dilemma of how to arrange content, materials, teachers, discipline and time in such a manner that was palatable in an "intellectually honest way" to all students;

and (2) the issue of whether an academic education was desirable for all students.

Since educational reform in recent years has been dominated by a renewed interest in academic achievement, it has fostered a debate as to the role of vocational programs in secondary schools. In an address to the Annual Convention of the American Vocational Association (1985), United States Secretary of Education, William J. Bennett stated he was concerned that in the education reform movement of recent years, vocational education has not been given the attention it deserved.

Silberman's comment in Professional News (1985) was a further indication of this belief when he said,

> "...we recognize that vocational education is the applied side of academics and is very significant as we watch what states are doing about the issue of increased requirements for high school graduation and the impact on vocational education programs. These recent broad-scale efforts to improve education across the nation, by increasing academic requirements will not, by itself, solve the quality issue; more is not always better.

This also reflected the opinion of former Secretary of Education, Terrel H. Bell, who stated "...the schools' primary responsibility is to provide the core competencies, and that other goals, whatever their merit, would come second" (Gardner, 1983, p. 34).

Based on the results of a survey study conducted by the Association of Supervision and Curriculum Development (1985), it is clear that most states have responded to public demand for educational improvement by enacting legislation increasing the number of units in academic subjects required for high school graduation. This movement has been focused largely upon secondary schools. Phipho & Flakus-Mosquedo (1984) found within the last few years, the enrollments in vocational education have been decreasing.

In order to make time for the essentials of "basic schooling", Adler (1983) proposed to eliminate "all specialized training for particular jobs" from the secondary school curriculum. Obviously, the implications of the survey by the Association of Supervision and Curriculum Development (1985) are that increasing the number of units required in academic subjects would more than likely decrease the time remaining for elective courses.

The Southern Regional Education Board (1985) moved decisively on a number of those recommendations, even in the face of severe budgetary constraints. While there has been progress toward quality, much remains to be done. The Southern governors and many legislators have played a major role in focusing on the improvement of education as the underlying prerequisite for economic development. However, if education in the South is to match the region's ambitions

for economic development, the task that remains ahead is enormous.

Perhaps in no other area addressed, according to authors of The Need for Quality (1981) had so little progress been made than in improving vocational education in secondary institutions as identified in this report. Three major questions needed attention: (1) What was the essential role of high schools in preparing youth for work?, (2) How could unwarranted duplication of vocational offerings be reduced? and (3) Did the vocational programs in secondary and in post-secondary institutions reflect the directions of economic change?

If they had not already done so, the Southern Regional Educational Board (1983) suggested states could give high priority to a close scrutiny of vocational education. Such reviews included evaluation of the objectives of vocational education in the high schools, of duplicated occupational offerings by the various sectors of education and of the market relevancy and quality standards of available programs.

Cyphert and Gant (1971) noted:

> ...if schools of education are to increase their effectiveness, they need to give fresh attention to the clarification and ordering of their goals...without ignoring persons outside the organization (p. 272).

Thus, it appeared the efficacy of reform hinged on the collaborative efforts of all individuals to promote and deliver quality education (Southern Regional Education Board, 1983).

The National Commission on Secondary Vocational Education's report, The Unfinished Agenda (1985), surmised: (1) More academic requirements constrained students access to vocational education and this was not necessarily the best preparation for life, (2) Eighty percent of the jobs in America did not require a college degree and (3) Vocational education was an advocate of basic academic skills.

It is speculated that the recent reports had advocated an effect on secondary vocational education even though they did not address vocational education directly. The calls for reform of secondary education were backed by the concrete recommendations of many influential study groups. However, Magisos et al. (1984) contended that vocational education could only benefit from the major recommendations of these National studies. He stated that vocational education would become a stronger program because vocational education would be more competitive for student enrollment, upgrade the curriculum to match the upswing in technological changes, motivate teachers to do a better job in the classrooms and instill the attitude that vocational education was for everyone.

Justification of Secondary Vocational Education

There were two major responses to the calls for education reform. One was the report, Education for Tomorrow's Jobs, (Sherman, 1983) prepared by the National Academy of Science. The other was the report of the National Commission on Secondary Vocational Education (1985), The Unfinished Agenda: The Role of Vocational Education in the High School. Both of these presented evidence and a rationale for the continuation and strengthening of secondary vocational programs (Lewis et al., 1985).

Education for Tomorrow's Jobs (Sherman, 1983) based its rationale primarily on meeting labor force needs in a rapidly changing economy. This report was assuming that because of this rationale, education would be placed or forced into a situation where they would probably require higher skill levels.

Vocational education has been an important and integral part of our educational system. As witnessed by The National Academy of Sciences' report, Education for Tomorrow's Jobs (Sherman, 1983), vocational education was given strong support for providing positive and worthwhile learning experiences in the classroom. This report had the potential to be a landmark study for vocational education. However, the recommendations have to be pursued with vigor and determination.

The Unfinished Agenda (1985) addressed the problem of serving students who differed widely in ability and interests. It argued for maintaining options in the high school curriculum to meet the varying needs of all students. The report implied vocational education was not for one type of child, but for all children and said it was a holistic and alternative way of looking at education.

It is desirable that the message of these reports be heard amid the many calls for the establishment of higher academic standards. Lewis et al. (1985) stated that the realization of this goal remained to be seen.

On June 29, 1983, President Reagan emphasized the importance of vocational education in his speech at the Vocational Industrial Clubs of America National Skills Olympics in Louisville, Kentucky:

> We will also recognize that our vocational classrooms are just as important as any other. And we can insist that the vocational courses we teach prepare this generation with the skills they need for real jobs (Hamilton, 1984, p. vii).

Hamilton (1984) stated the quest for excellence was not, and could not be, confined to the walls of college preparatory schools and universities. He believed it would also be found in the vocational education classrooms, labs, and cooperative education worksites where students learned the knowlege, skills and attitudes they needed to be successful employees in a variety of occupations.

In a more recent article, Hamilton (1986) viewed United States vocational curricula as legitimate alternatives for students who were ill at ease and unsuccessful with academic learning. He said the practical, real-life quality of vocational education was more comfortable and more effective for marginal students than was academic education. Therefore, vocational education or manual training served as a vehicle for teaching academic skills.

Sherman (1983) based her rationale for the continuation and strengthening of secondary vocational programs on the fact that in order for them to meet the labor force needs of a rapidly changing economy, vocational programs would need to require higher skill levels. Recent studies (Harris, 1985) have shown the greatest amount of learning occurred when one applied acquired knowledge in a practical work situation. Harris (1985) further contended that for many people, the ability to bridge the gap between the classroom and the world of work was crucial to success in life.

Vocational education was and has been an essential part of general education. Elliman (1984) held a firm belief in the value of vocational education when he stated education needed to develop courses that taught people how to handle, manage or just work with other people.

Silberman (1984) said vocational education provides activities from which students acquire technical skills that are applicable in a wide range of occupations. All students

need a balanced mix of both academic and vocational experiences in a common core curriculum.

Ames, an executive search consultant with James H. Lowry & Associates, a Chicago-based management consulting firm, stated, "You need to be good at problem solving and analysis" (Jackson-Opoku, 1985). Owens & Monthey (1983) found in their study that there was general agreement that additional training was needed in areas such as computer literacy, the necessity for retraining and lifelong learning, basic economics and time management. When asked who could be responsible for performing these additional training functions, most respondents said they could be the responsibility of educational institutions.

Vocational education in particular has been challenged to respond to the complex social and economic needs of society. Despite contemporary vocational and educational legislation that mandates social reform through education, the economic promises of vocational education continue to generate the greatest hope for increased opportunity (Wade, 1984).

The National Commission on Excellence in Education (Gardner, 1983) urges that high school curricula "...also provide students with programs requiring rigorous effort in subjects that advance students' personal, educational and occupational goals" (p. 26). Silberman (1983) supported this effort because he did not think that proposals to

eliminate high school vocational training and return everyone to the classic education formerly reserved for restricted elites solved the dilemma of equality versus excellence. He believed they would aggravate them and set the stage for further withdrawal of popular support for public schooling.

In a study conducted by the Delaware State Department of Public Instruction (1985), the issue of vocational education's role in the recent "resurgence" of the "basics" could not be clearly identified. The critical issues found were the lack of preparedness of youth to adapt to the changing job market, and the difficulties encountered in attempting to take advantage of available opportunities. Workers have the ability to learn through the workplace. Anderson and Brouillette (1986) contended that the changing job market posed a major challenge to youth and to the schools they attended.

Despite all the attention given A Nation at Risk (Gardner, 1983) and the other educational reform reports which were mute on vocational education, the public's support for vocational education held firm. This support is clearly revealed in the annual Gallup Poll on Attitudes toward the Public Schools published each year in the September issue of the Phi Delta Kappan.

> The 1981 Gallup Poll reported that 64 percent of the respondents felt that students not planning to continue their

> education could receive vocational training in high school. In the 1984 report--after all the reports on secondary education cited the need for more "basics"--this figure increased to 83 percent. There is also an increase in support for vocational courses for those planning to go to college, from 34 percent in 1981 to 37 percent in 1984 (Lewis et al., 1985, p. 6).

A Joint Partnership: Academic and Vocational Education

Sherman (1983) said the issue was not whether secondary students could be prepared for jobs, nor was the issue whether secondary students could receive a general or a specialized education. She believed it was not an either/or situation and that all students needed both kinds of preparation.

It is time for positive, creative thinking and action about a plan to find time for vocational education. Brown (1984) believed general and vocational education could work together in a cooperative manner to accomplish this. The National Center for Research in Vocational Education (1980) believed there now existed a unique educational opportunity which would allow an integration of general education and vocational education and this needed to be exploited.

Sherman (1983) suggested that to generate activities that would make vocational education, in the words of the National Academy of Science Study Committee, "an equal partner with academic education in the education system as a whole." Hamilton (1984) also supported this type of shared

learning partnership. He contended that high school graduation requirements be modified from a course basis to a competency basis.

While mastery of fundamental skills is essential for everyone, educators were faced with diversity of ability levels, interests and future plans among high school students. Vocational education in the secondary school curriculum could be important if this diversity among students were addressed. Vocational education would become a strong partner in the movement to produce high school graduates with the necessary skills for further learning--on the job or in formal education (Southern Regional Education Board, 1985).

In addition to this, Solorzano (1985) found competition from industrialized nations such as Japan and West Germany have focused attention on U.S. education and found it lacking. Gayle, Associate Director for Vocational Education in North Carolina, said, "If we could figure out more ways to integrate academic skills into practical applications, we would be way ahead" (Solorzano, 1985).

High school students who are not planning to attend college full time could combine vocational and academic course work to maximize their success in the labor market. Gordon (1985) stated that taking additional vocational courses resulted in only a small reduction in the number of academic courses taken.

Taking additional vocational courses was strongly associated with success in the labor market immediately after high school. Academic and vocational education were complementary, and Gordon (1985) suggested students, not bound for college would do well to blend the two.

Seeley (1984) noted the emphasis on school improvement focused on partnership rather than school services and standards. The report by the Delaware State Department of Education (1985) found the area of greatest need seemed to be to improve existing vocational programs in relation to increased emphasis on mathematics and science content and to develop cooperative approaches in helping teachers with that task.

Harris (1986) believed to enhance chances for success of its students in the job market, schools could create a curriculum that developed skills and built character. He thought students could explore various fields of interest and that by learning a range of skills could become valuable assets to major corporations.

The American Council of Life Insurance (1983) insisted that partnerships between schools and businesses would be an important part of this new curriculum model. Indeed, the positive relationship between manufacturers' perceived benefits and their involvement with vocational education suggested that both manufacturers and vocational educators might profit from greater involvement of business executives

in the planning, conduct or evaluation of vocational education (Nunez & Russell, 1982).

Rarely has a proposition received as much enthusiastic support or generated as much action as the call for greater involvement of private sector business and industry in vocational education programs. However, business and industry involvement could result in vocational education becoming their servant if caution was not exercised (Pratzner, 1983).

Integrating vocational and academic programs has been proposed in direct response not only to the call for excellence, but also to recommendations for the establishment of a common curriculum in order to avoid the present stigma associated with being a vocational student (Hughes, 1984). The preferred alternative was to integrate vocational and academic programs. This policy option addressed directly the imperative for excellence in secondary vocational education. It provided career exploration and employability for all students, yet retained the opportunity for employment preparation during the later years of secondary education.

Compared to the other policy options, amalgamation of vocational and general education has been more expensive and less feasible politically; yet it has promise for removing the stigma of too-early tracking of students and for providing an excellent education for all secondary

vocational graduates (Hughes, 1984). Federal and state vocational legislation encouraged even greater collaboration with involvement of business, industry and labor in all aspects of vocational education (Lewis & Pratzner, 1984).

The consensus among the literature reviewed, though by no means clear and widely articulated, seemed to be that vocational education at the secondary level, could be integrated better with general education, and emphasis could be on the development of broadly applicable skills useful to all students in a wide range of future occupations.

According to interviews with school district officials, increased academic graduation requirements and decreased funding were causing cutbacks in the number of vocational courses and students in most California school districts. But longer school days, support from administrators and school boards and partnerships with industry were helping some districts increase or hold the line on vocational enrollments and course offerings (Price, 1985).

The preferred alternative of increased academic requirements for graduation was to integrate vocational and academic programs. This policy option, addressed directly the imperative for excellence in secondary vocational education, provided career exploration and employability for all students, yet retained the opportunity for employment preparation during the later years of secondary education (Hughes, 1984).

Industry could play a greater role in redirecting vocational education to reflect the work skills of the future than has been accomplished through advisory councils in the past. Indeed, business leaders are currently involved intimately in the implementation of the Jobs Training Partnership Act (JTPA). JTPA is concerned with shaping needed directions for retraining unemployed and displaced workers--directions which could be equally relevant in planning vocational education programs for young people (Southern Regional Education Board, 1983).

Overview

Since passage of the Smith-Hughes Act in 1917, the emergence and rapid growth of firm-specific training programs represented a complete departure from the philosophy and history of public vocational education for the past sixty-six years. From its earliest beginnings, occupation-specific rather than employer-specific preparation has been the preferred format for most pre-employment preparation for work (Pratzner, 1983).

In 1983, the National Commission on Excellence in Education recommended that Americans create "a learning society"--that, as a people, we share a vision in which life-long learning is encouraged and valued, people are challenged to grow from childhood through old age, and all people could become both students and teachers.

If there has been one message from the past two years of educational reform, it is that the American people want their high schools to do better. Vocational education should show how it could help high schools do better, or it would not continue as part of the secondary curriculum (Lewis et al., 1985).

With education in the midst of major ferment, many vocational educators have been concerned that the reform movement is ignoring vocational education. Proof of this was evidenced by the increases being made in academic requirements for graduation which was making it difficult for students to choose vocational courses. Vocational education demonstrated it contributed to the attainment of broad educational goals or risked being squeezed from the secondary curriculum (Lewis et al., 1985).

Increases in academic requirements has made it more difficult to schedule vocational courses at the secondary level. The Association for Supervision and Curriculum (1985) supported this trend because they believed negative consequences were more likely for high school students who did not plan to go on to college.

The consequences of the current economic climate affected vocational education in two ways. On the one hand, vigorous economic growth produced a demand for trained workers since growth made it easier to place graduates, convinced employers to participate in cooperative education

and provided specialized training for specific firms. On the other hand, the attention of the Federal administration and congress has been focused on ways the Federal deficit could be reduced. Lewis et al. (1985) contended this attention is primarily diverted into a search for politically acceptable ways to cut spending or increase revenues.

In such a climate, it seemed very unlikely vocational education would receive any real increase--an increase in excess of inflation--in Federal appropriations for the next few years. As other Federal domestic programs were cut or eliminated, there has been pressure on state and local sources to provide services that were previously paid for with Federal funds (Lewis et al., 1985).

Rapid rates of technological change have been causing a need for upgrading and retraining. Greater integration of general and vocational instruction at the secondary level appeared virtually inevitable (Lewis et al., 1985). Vocational education is not, of course, the sole answer. Preparation would start early and be continuous. Vocational education could help to reinforce this improvement by stressing literacy and computational skills. It could also help students acquire those work discipline and dependability traits that employers see as fundamental to success in all jobs (Lewis et al., 1985).

Secretary of Education, William J. Bennett, concluded his address to the Annual Convention of the American Vocational Association (1985) by reaffirming the broad purpose of education outlined nearly two hundred years ago by Thomas Jefferson. Jefferson intended education to prepare all students for a working lifetime, a lifetime of learning, thinking, communicating and bearing responsibilities to others; a lifetime in which they had to appreciate that good competent work was a noble thing. Therefore, it seems secondary vocational education programs should be moving to align their goals with these former intentions of education.

Increases in high school graduation requirements undoubtedly represent a major influence on vocational education. How this influence would be felt depended on how the requirements were implemented. Lewis et al. (1985) advocated that academic credit could be available through courses in an applied setting where the relevance of the skills was emphasized, students would be retained and the instruction was likely to be more effective.

Hruska (1974) stated it was illusory to believe the needs of young people could be met by serving the interest of particular institutions. Research conducted by the Association of Supervision and Curriculum Development (1985) cautioned that a pattern should never be permitted to persist that by intent or effect worked to the advantage of

some students, but the great detriment of others. Benevot (1983) stated that justifying a differential set of rights for different groups of citizens was no less suspect than the structuring of secondary schooling with winning (academic) and losing (vocational) tracks.

The convergence of these influences virtually ensure a change in secondary vocational programs. Vocational education would either be gradually forced out of the secondary curriculum, or it assumed an increased and explicit responsibility for ensuring all secondary students were competent in the skills expected of high school graduates.

If vocational education is to survive, it would be necessary to demonstrate that instructional materials and methods by which English, mathematics and science are taught could be presented and utilized in vocational courses. Of course, the skills of vocational students would have to be improved as a result of such instruction.

Two myths about high technology was that it would be the primary source of new jobs and it would vastly upgrade the skill requirements of jobs. Educational implications of these changes included the need to increase and strengthen basic education; the need to strengthen the idea of lifelong, recurrent education; and the need to gear training and education toward adaptability and flexibility (Rumberger, 1984).

The contention has been that the most important missing element from the present system of education and training is a comprehensive emphasis which provides individuals with the types of education and training they would need throughout their working lives. Such an emphasis, called recurrent education, would be designed to (1) respond to emerging education and training needs, (2) cover a wide range of education and training opportunities and (3) establish a system of finance and information which allowed individuals to undertake a variety of educational and training experiences over a lifetime (Levin, 1984).

There is a need to modify secondary vocational education programs to meet the demanding challenges of today and the decades ahead. These challenges include the continuing and rapid technological change in the workplace, the increasing change in the characteristics of the work force and the need to support the economic stability of individual citizens and the state. Outcomes which have been identified or used in the past would no longer be appropriate or feasible in the face of new challenges. Outcomes would be identified which met not only present needs but were adaptable to future directions (Wentling & Barnard, 1984).

Butler (1986) stated character building would be an important component of American public education, as it has been in the past. He said our public schools should return

to practices that promoted good work habits and developed such positive traits as responsibility, self-discipline and self-reliance. He believed the lack of these traits are the primary reason many young people are unemployable. The only opportunity we have as a society to instill these positive values and attitudes is through public education.

Vocational education demonstrated, in convincing fashion, that vocational instruction makes a contribution to the attainment of general education goals. All vocational educators have been convinced that it does; they now have to prove it to the skeptics (Lewis et al., 1985). Silberman (1983) contended that, in order to serve students better, high schools could eliminate vocational tracking and provide both academic and vocational training for all students.

It has been suggested that vocational education could be evaluated in terms of inputs versus outputs, that is what went into the enterprise and how it functioned. However, empirical research has not documented a substantial body of knowledge concerning the outcomes of vocational education (Darcy, 1979).

To achieve excellence in vocational education, four policy alternatives have been suggested by Hughes (1984): (1) productivity enhancement, (2) integration of vocational and academic programs, (3) allocation of funds to special needs' populations and (4) modification and continuation of the present pattern.

Butler (1986) suggested both business and the public schools needed to reassess employability requirements because rapid introduction of new technologies and burgeoning of service industries are having a profound impact on the type of work that today's students would find in the job market. He believed the more rewarding jobs would become increasingly non-routine, placing greater demands on workers to think creatively and to learn throughout their careers.

Most of the research presented in this review provided definitive answers on the effects of vocational education. However, the summary of the results across many studies suggest certain effects appear likely to have been due to increased academic requirements for graduation.

The surest way to weaken and lead to the eventual demise of vocational education at the secondary level would be to try to ignore the educational reform movement and attempt to continue business as usual (Lewis et al., 1985). A case needs to be made that vocational education not only contributes to the attainment of skills but does it more effectively for some students than the traditional academic curriculum. This contention dated back to the manual training movement of the late 19th century and was explicitly stated in the 1914 Report of the Commission on National Aid to Vocational Education (1974):

> Vocational training would indirectly but positively affect the aims and methods of general education: (1) develop a better teaching process through which the children who do not respond to book instruction alone could be reached and educated through learning by doing; (2) introduce into our educational system the aim of utility, to take its place in dignity by the side of culture and to connect education with life by making it purposeful and useful (p. 117).

Where vocational education has not been meeting the expectations of the general public, it should be improved, not abandoned. The potential of vocational education exists to offer a worthwhile education to young people who need or want to enter the work force right out of high school, or who do not thrive under a rigorous academic approach to learning.

The effects of increased academic requirements for graduation on secondary vocational education programs has yet to be fully determined; however, these increases are making it difficult for students to choose vocational courses (Lewis et al., 1985). Therefore, the present study promises to determine whether or not secondary programs in vocational education in one state are being threatened. As such, it offers a model that could be used for similar studies in other states and provides data to be generalized to other areas where similar circumstances exist.

CHAPTER III

RESEARCH DESIGN

Introduction

Chapter III presented the methods and procedures used in this study. Information was given regarding the selection and description of the respondents and construction and administration of the instruments and techniques used in analyzing the data.

Setting

The school districts in the state of Washington that had increased their academic requirements for graduation since 1983 were identified when the survey was distributed and returned. A list of school districts in Washington was obtained from Patterson's American Education (1986). The Washington Education Directory (1986) was also utilized as a reference. Both publications listed 297 school districts in the state of Washington recognized by the Office of the Superintendent of Public Instruction in Olympia, Washington.

Of the 297 districts, 242 were identified as having secondary vocational education programs. However, there were only 211 school districts who participated in the present survey because they were the only districts to

increase their academic requirements for graduation since 1983. These school districts were included in the survey regardless of whether the funding of the vocational program was from local or state support.

Respondents

The vocational directors in the state of Washington were the targeted respondents for this descriptive study. A listing of the vocational directors was obtained from the Office of the Superintendent of Public Instruction in Olympia, Washington.

Vocational directors were asked to complete the questionnaire since they tend to carry a high regard for the vocational education profession in general and would likely respond. It was also expected that they would have the most readily available and accurate information needed to complete the questionnaire.

Several school districts did not have vocational directors; therefore, in these cases, other school personnel were asked to complete the questionnaire. When there was no vocational director for a given school district, the person administratively responsible for vocational programs was asked to complete the questionnaire. The title of these respondents varied. Respondents who were referred to as vocational administrators included: (1) superintendents, (2) assistant superintendents, (3) directors of curriculum

and staff development, (4) principals, (5) assistant principals, (6) administrative assistants, (7) counselors and (8) vocational teachers. The title of the respondent was recorded on the questionnaire form.

A letter of request (Appendix A) was sent to Dr. Donald W. Fowler, President of the Washington Association of Vocational Administrators. The purpose of this letter was to acquire endorsement from this professional organization to increase the response rate across the state of Washington. The endorsement was forthcoming (Appendix B) and was subsequently used in the second mailing of the cover letter.

The vocational directors and vocational administrators answered items on a questionnaire that were designed to address the issues directly affecting their school district. Wording of the questions was designed to elicit responses that would yield factual information rather than opinion or perception.

Instrumentation

Construction. It was decided to utilize mail surveys to field test and revise the instrument as well as to collect data for the study itself. It was speculated that the alternative of a telephone survey would likely not yield as precise data as a mailed questionnaire, because it would not allow the respondent time to search out figures for

completing the survey. Also, it was felt that a telephone survey would force vocational directors to recall from memory the information needed, which would result in both invalid and unreliable data on which to base this study. Therefore the decision to utilize a mail survey was made.

The instrument was constructed taking into account the types of concerns that are facing secondary vocational education programs today. It was developed by the investigator specifically for the purposes of the present study.

The items comprising the instrument were gleaned from reports of similar studies in the past. Among these were the questionnaires previously developed for research in this field by Anderson & Brouillette, (1985) and by the Delaware State Department of Public Instruction (1985).

The present instrument was designed to collect data which would allow the investigator to determine the nature and extent of the enrollment changes in vocational education programs in public secondary schools as a result of recently increased academic requirements for graduation. An arbitrary decision was made to use 1983 as the critical year of onset. Completion of the task of constructing the instrument was achieved during the 1986-87 school year.

Field Testing. The first field test of the instrument was conducted with educators residing in Las Vegas, Nevada. Several experts from the Clark County School District and

nearby Clark County Community College were asked to participate as part of the field test population.

These people were considered authorities in the field of vocational education. Specifically, they were: (1) Marshall Darnell, Clark County School District Occupational Education and Special Projects Director; (2) Ward Gubler, Clark County School District Vocational High Schools and Occupational Education Director; (3) Anne Keast, E G & G Training Director (former Vocational Director for Bend Administrative School District, No. 1 in Oregon); (4) Gene Grimm, 1985-86 Clark County Vocational Association President, (5) Mary Appel, Counselor Coordinator at Bonanza High School; (6) Lew Edwards, Vocational Counselor's Coordinator for Clark County School District; (7) Mario Monaco, Director for the Southern Nevada Vocational Technical Center; (8) Dan Berg, Director for Area Technical Trade Center; (9) Mary Malley, Coordinator of Occupational Education Grants for Clark County Community College and (10) David Hoggard, Director of Occupational Programs for Clark County Community College.

These people were identified as experts in the field of vocational education because of their (1) years of experience in vocational classrooms and in school administration, (2) educational service to the community and the public school system, (3) professional schooling and (4) business experience. They constituted an expert panel which

was utilized in critiquing the content of the questionnaire both because of their expertise in the profession and because they had all had previous knowledge in writing and answering questionnaires.

This first field test group received a cover letter (Appendix C) with the initial draft of the questionnaire requesting they critique, revise, and analyze the content of the questions asked and the "Points of Clarification" handout. They were not asked to complete the questionnaire itself.

The first mailing to this panel took place on January 11 with a second follow-up mailing on January 22. Follow-up contact (Appendix D) was made by telephone before the second mailing (Appendix E) was distributed.

A 100 percent response rate was ultimately received from this first field test group. Each respondent received a thank you letter (Appendix F) indicating they would receive a copy of the results of the research when the study was completed.

The "panel of expert judges" selected to serve as the second field test group was comprised of both vocational directors and vocational administrators from the state of Oregon. Only 20 percent of the respondents from the second field test group were vocational directors from the state of Oregon. The remaining respondents were superintendents, principals, assistant principals, administrative assistants,

counselors, curriculum coordinators/directors, secondary education directors and vocational teachers.

The 31 vocational directors/administrators were randomly selected throughout the state of Oregon from school districts that were known to have increased their academic requirements for graduation since 1983. This list of potential respondents for the state of Oregon was secured through the Office of Public Instruction (Appendix G) located in Salem, Oregon.

A revised "Points of Clarification" handout and questionnaire were sent to these 31 individuals in the state of Oregon. The questionnaire used in this mailing included the earlier revisions suggested by the Nevada panel of experts.

The respondents were requested to give constructive input on the content, organization, layout, grammar and understanding of the questionnaire as well as complete it for their respective school district. They were specifically requested to write comments, notes or any suggestions if questions were unclear or if the directions needed to be reworded. Once they completed the questionnaire, they were simply asked to return it in the stamped-addressed envelope provided. A 100 percent response rate was also received from this second field test of the instrument. Again, all suggestions were carefully reviewed and the instrument modified in harmony with them.

The same follow-up thank you letter sent to the Nevada respondents was also sent to all Oregon participants of the field test who requested a copy of the results of the research at the conclusion of the study. A similar follow-up thank you letter (Appendix H) was sent to the respondents who did not want a copy of the results or who left this blank empty when completing the questionnaire.

Reliability. The test-retest procedure was used to ascertain reliability of the instrument. Determination of test-retest reliability was appropriate when alternate forms of the questionnaire were unavailable.

In determining the coefficients of equivalence and stability, it was necessary to administer the questionnaire twice. To secure data for this purpose, the same questionnaire was administered in the state of Oregon on two different occasions approximately one month apart.

The procedure for test-retest reliability was simple; (1) the questionnaire was administered to a sample of subjects on January 31; (2) after some time had passed, the final version of the questionnaire (Appendix I) was administered to the same individuals again on February 28; and (3) finally, the two sets of scores were correlated.

A positive association between the two scores with the same group on separate occasions yielded a reliability coefficient of .89. This established the questionnaire's equivalence or stability.

Reliability is affected by a number of factors. One factor is the length of the questionnaire as increased length tends to increase reliability. The present survey form was long enough to establish better reliability without being too lengthy or time consuming to answer which also insured a stronger response rate. The forced-response items enhanced the chances of the consistency of the questionnaire across respondents and aimed to produce the required data. Questions appeared to be acceptable and not sensitive nor offensive.

A major issue when employing this type of reliability measure was the difficulty of knowing how much time should elapse between the two testing sessions. The interval, 30 days, was selected as one that was not too short for the chances for subjects to remember responses from the first administration yet short enough so that little intervening learning or maturation could occur.

Since the reliability coefficient of .89 indicated high reliability, there was minimum error variance. Therefore, the effect of errors of measurement were reduced. This indicated that these sources of random errors had been adequately controlled. The questionnaire appeared to measure consistently what it was intended to measure.

Validity. Validity was determined primarily through expert judgment of how critical the data asked for would be and the appropriateness of the interpretation of the results

that could be made from it. The panels deemed the data gleaned via the questionnaire would indeed be appropriate and specific for the intended use.

The type of validity employed was content validity as determined by expert judgment. As is true for this type of validity, there was no formula by which it could be computed and no way to express it quantitatively.

The panel of experts from the states of Nevada and Oregon were each asked to assess the content validity of the form. These experts carefully examined all of the items on the questionnaire and made a judgment concerning how well they represented the intended content area. This judgment was based on whether all subareas had been included and in correct proportions. In other words, a comparison was made between what ought to be included in the questionnaire, given its intended purpose, and what was actually included.

Based on the judgments of the two panels of experts the content validity of the questionnaire was established for the present study.

Collection of Data

A cover letter (Appendix J) explaining the purpose of the study accompanied the questionnaire (Appendix K) that was forwarded to the 211 subjects. The deadline for return of the questionnaires was March 25, 1987. Enclosed with each questionnaire was a stamped/addressed envelope and a

"Points of Clarification" handout (Appendix L) which offered definitions and generally attempted to clarify the terminology used in the questionnaire.

Follow-up telephone calls were placed to respondents who completed and returned the form but did not complete the predetermining portion of the questionnaire. The information was vital in order to use the school district as part of the study. If the respondent was unable to be reached by phone, a follow-up letter (Appendix M) was sent.

Some respondents provided very encouraging remarks in which the investigator responded to in the follow-up thank you letter. Some school districts sent student surveys, newspaper articles and other pertinent information related to the increase in graduation requirements.

Follow-up telephone calls were placed March 26 and 27 to those vocational directors/administrators who did not return the questionnaire. A second cover letter (Appendix N) and questionnaire were sent on March 28 with a new return date of April 4. Accompanying the second mailing of the questionnaire was a letter of endorsement from the President of the Washington Vocational Association of Administrators and another letter (Appendix O) inviting the investigator to present her findings as a panel member for a symposium at the American Vocational Association Conference in Las Vegas, Nevada in December, 1987. A stamped/addressed envelope was included with this mailing.

Follow-up telephone calls were placed on April 2-3, 1987 before the due date of the second mailing of the questionnaire in an attempt to increase the response rate. A continuation of telephone calls were placed April 6-8, 1987 to determine whether or not the vocational director/administrator would be able to complete the questionnaire and return it.

Every vocational director/administrator who responded to the questionnaire received a thank you letter (Appendix P). The letter indicated they would receive a summary of the results of the research findings (Appendix Q) if they checked the response that requested this information when completing the questionnaire.

Those respondents who completed the questionnaire and asked not to receive a copy of the results or did not check the blank on the questionnaire also received a thank you letter (Appendix R) requesting they contact the investigator if they should decide to review the research findings when the study was completed.

Treatment of the Data

The data analyses consisted of descriptive statistics--percentages applied differentially to the data generated by each instrument. Comparisons were then made.

The results of the questionnaires were compiled in descriptive form. The data from each of the questions were

first tabulated to show the percentage of answers. The responses were placed in a table format to indicate those responses from each of the questionnaires. A table was designed for each question to display the results of the percentages.

The techniques or methods used to analyze the data were based on percentages of respondents once the data was secured. Justification of descriptive treatment was applied because sophisticated statistical treatment was not necessary for the purposes of this study.

Summary

This chapter outlined the setting of where the study was conducted, the subjects utilized for completing the questionnaire, an explanation of how the instrument was developed and field tested and finally the procedure of how the study was investigated.

CHAPTER FOUR

ANALYSIS OF DATA

Introduction

This chapter presents the descriptive results of the "1986-87 High School Graduation Requirements Survey." For convenience of understanding these results are offered under the following format:

I. General Information

II. Section I - School District Requirements

III. Section II - Cross Crediting

IV. Section III - Enrollment Projections

V. Section IV - Budget and Teacher Ratio Increase or Decrease

VI. Section V - Curriculum Trends

General Information

All school districts in the state of Washington who had secondary vocational education programs were considered for possible inclusion in the study. There are at present 297 school districts in Washington. In the end, not all districts were surveyed, primarily for three reasons. First, it was found that 31 school districts had not increased their academic requirements since 1983 and therefore data from those schools would not be relevant to

this study. Second, some districts did not have a high school and thus were not included. Finally since some school districts do not have a secondary vocational education program, these too were eliminated from the study. As a result of these factors, a total of 211 school districts were actually surveyed.

Although not all of the 211 school districts in Washington which were included in this study have vocationally state-supported programs, all were surveyed because type of funding was not an issue in this study. Seventy-two percent of the school districts returned usable forms and thus were judged to have responded to the "1986-87 High School Graduation Requirements Survey."

The response rate from districts who did not employ vocational directors was lower than the response rate of school districts who employed full-time vocational directors. It appeared from the pattern of returns that vocational directors gave immediate and direct attention to the survey as compared to building principals or other school district personnel, since the area under study was so closely related with the future of secondary vocational education programs.

The first part of the survey yielded data used to categorize high schools by type of school, i.e. three-year or four-year, public institutions. Fifteen percent of these high schools were found to be three-year as compared to 85

percent that were found to be four-year high schools. Graduation requirement standards were the same in these two types of high schools so it was determined that the analysis of results could be pooled.

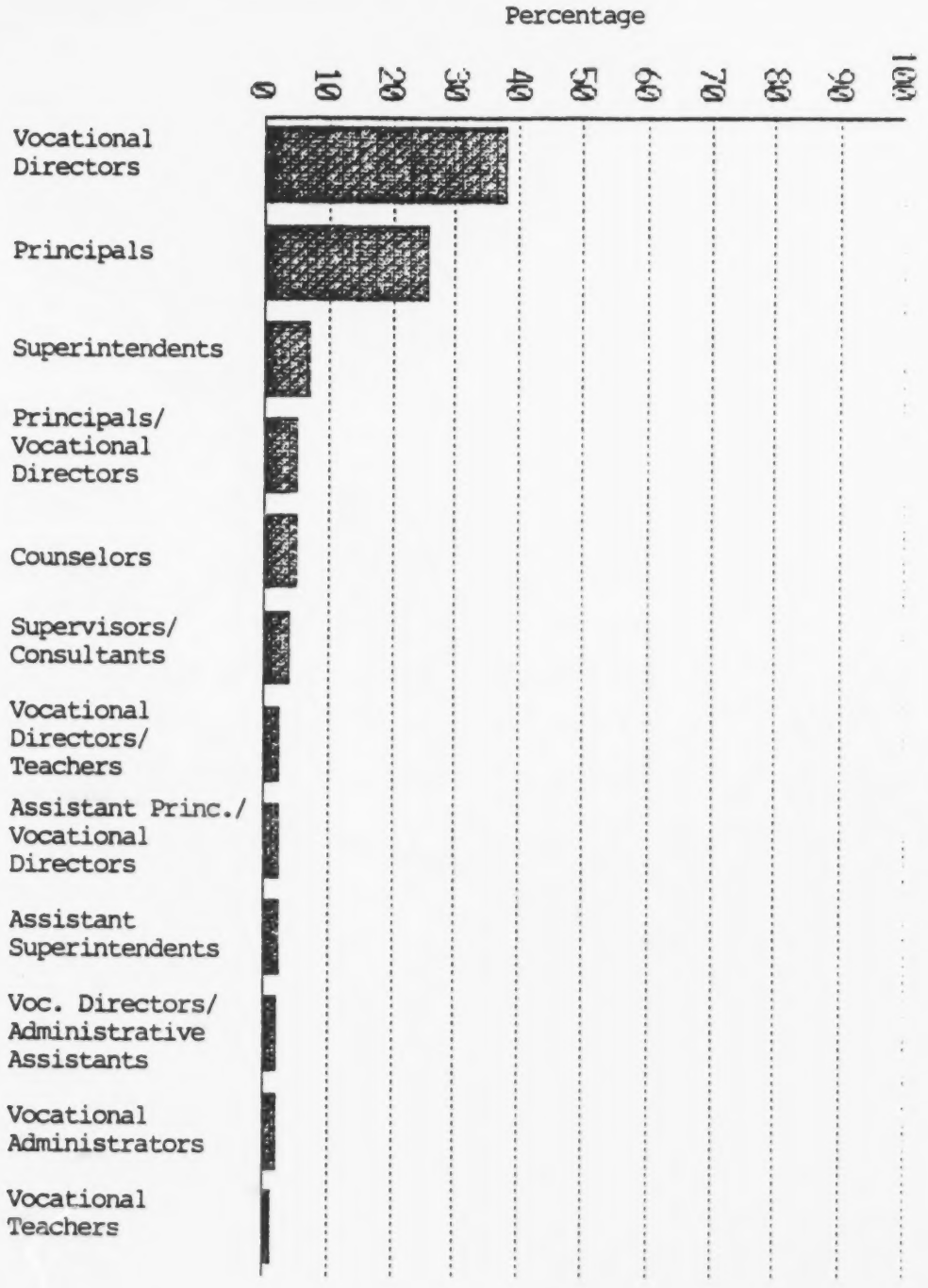
Depending upon such factors as the size of the school district and its student population, the survey respondents' job titles varied from district to district. Of the school districts surveyed respondents reported having a variety of titles. The variety of titles and relative presence of each is displayed in Table 1: (1) 37.7 percent were vocational education directors, (2) 25.8 percent were principals/vocational administrators, (3) 7.3 percent were superintendents, (4) 5.3 percent were principals/vocational directors, (5) 5.3 percent were counselors, (6) 4.6 percent were supervisors/consultants of secondary vocational education programs, (7) 2.6 percent were vocational directors/teachers, (8) 2.6 percent were assistant principals/vocational directors, (9) 2.6 percent were assistant superintendents, (10) 1.3 percent were vocational directors/administrative assistants, (11) 1.3 percent were vocational teachers and (12) 1.3 percent were vocational administrators.

School District Requirements

The questions asked in this section focused on three similar topics. The first question related to the year

Table 1

Job Titles of Survey Respondents



academic requirements were increased to earn a high school diploma. A relationship between the year the national reports were released and the year most school districts began increasing academic requirements for graduation was drawn from the data. The total number of units required to earn a diploma was compared with the total number of academic units required to earn the same diploma. These questions elicited data to determine what percentage of time was available during the regular school day in which to take vocational or elective courses.

Every year from 1983 through 1987 a portion of the 211 school districts increased their academic requirements to earn a high school diploma. Responses were based on the requirements for earning a "regular" high school diploma in their respective school district. Each school district's definition of academic credit was used for questions throughout the survey.

As shown in Table 2, nearly fourteen percent of the school districts increased their academic requirements for a high school diploma in 1983; 25 percent in 1984; 39.7 percent in 1985; 18.5 percent in 1986; and 2.6 percent in 1987.

Data on the number of academic units required to complete high school is presented in Table 3. As evidenced, the average number of units required to earn a high school diploma in 1987 was 22.7. The average number of academic

Table 2

Year of Academic Requirements Increase

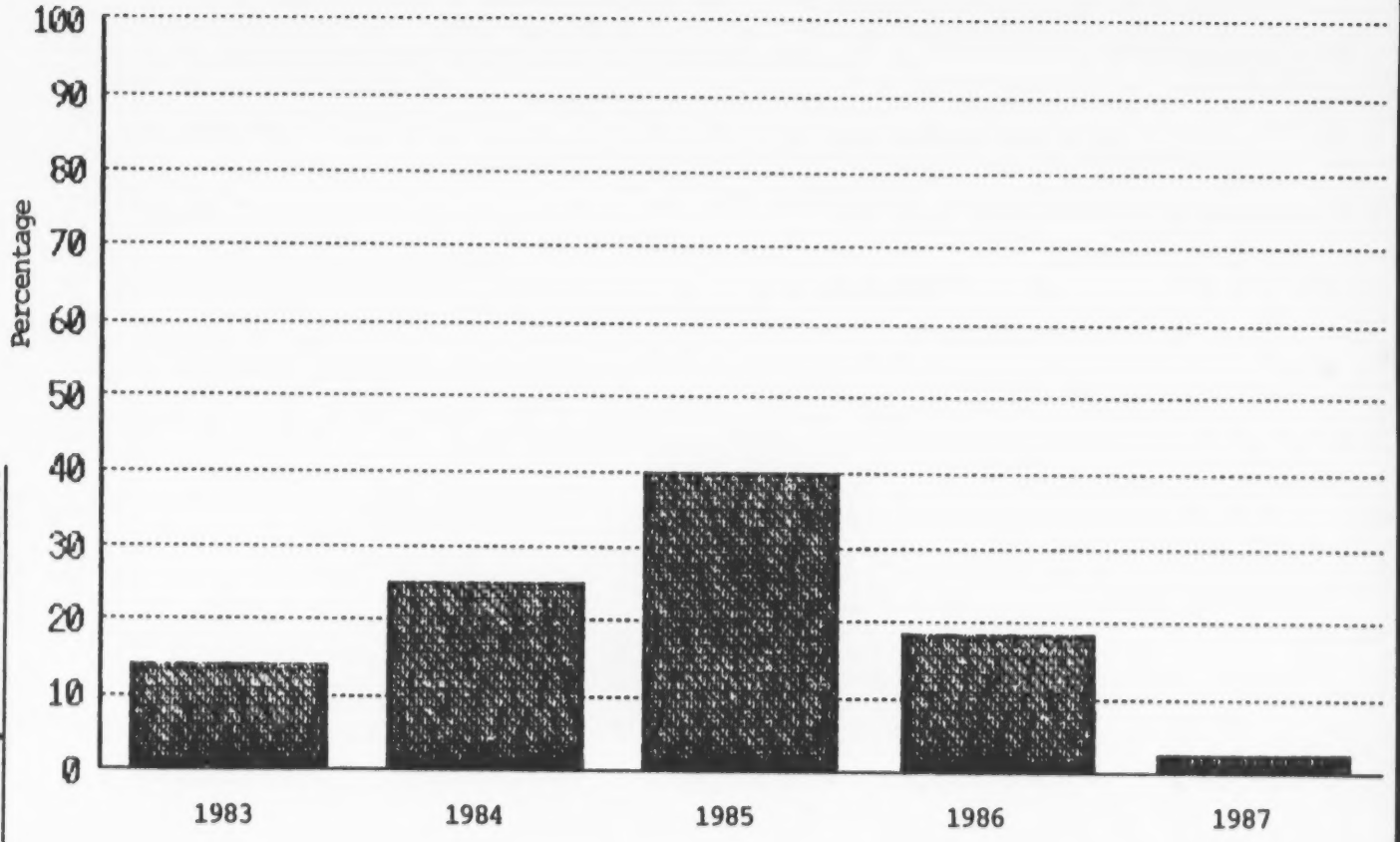
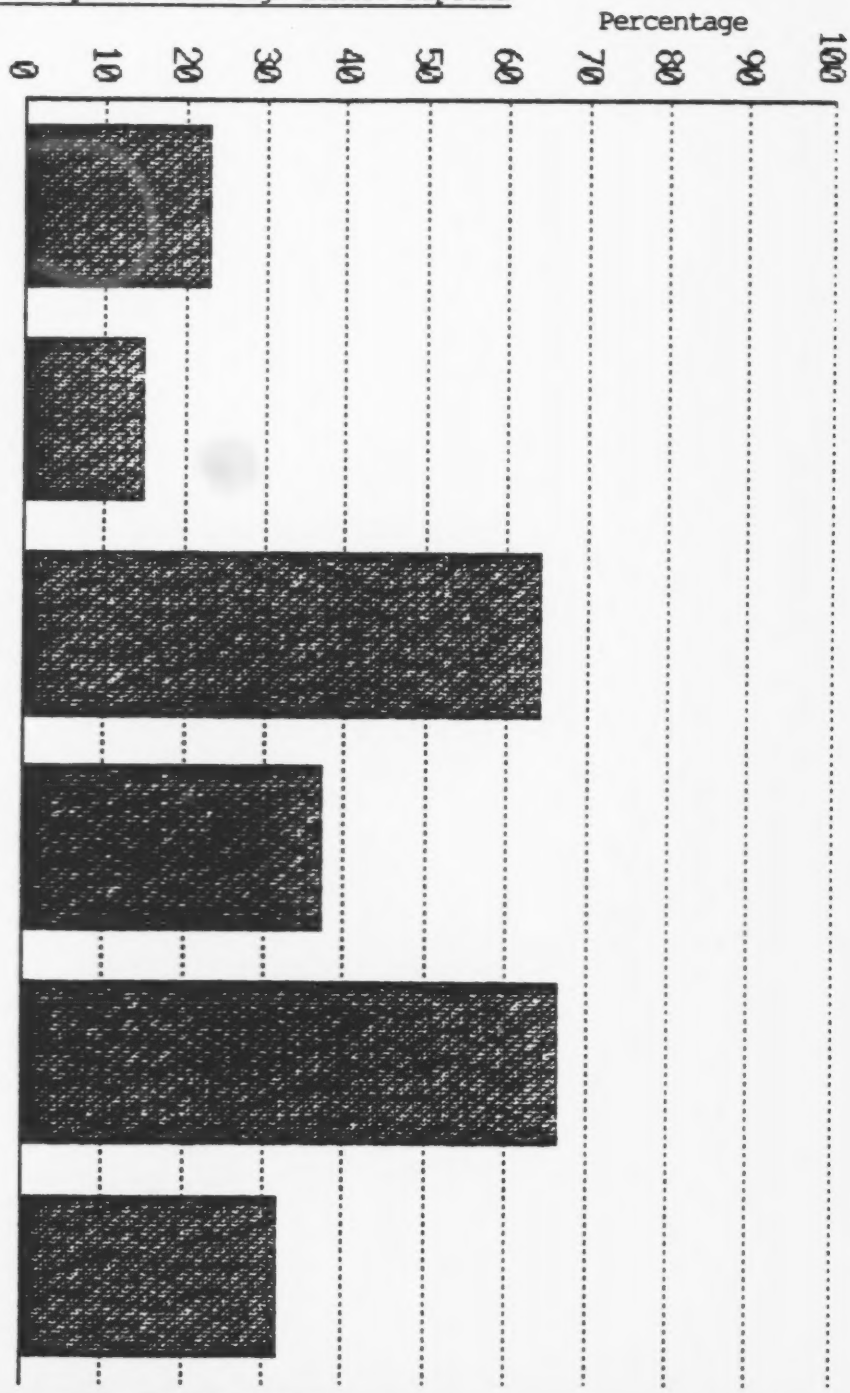


Table 3

Academic Units Required for High School Diploma



units, excluding electives, required for high school graduation was 14.7. Thus, 64 percent of the curriculum was identified as "core requirements" for students to complete and graduate from high school with a regular diploma. This left approximately 36 percent of the curriculum available for student electives outside of the core requirements. Thus it appeared that, on the average, there was adequate flexibility in high school curriculum for students to continue to take vocational classes.

Cross Crediting

It was found that in some high schools, classes are given both academic and vocational credit concurrently. This is typically called cross crediting in many school districts across the state of Washington.

The next section of the questionnaire asked questions related to the district's policy of accepting vocational courses for academic credit and vica versa. These questions were used to determine the percentage of school districts across the state which permitted this type of dual or cross-over credit allowance.

Approximately 66 percent of the school districts surveyed allow cross crediting of classes while 32 percent do not permit cross crediting of classes to fulfill graduation requirements. A small portion--2 percent of the

population surveyed--did not respond to this question. See Table 3 for a graphic presentation of these data.

There was a wide variety of courses allowed for cross crediting among those school districts who utilize it to fulfill graduation requirements. The names of these courses were too numerous to mention here, but are shown as a list in Appendix S.

Enrollment Projections

For the purposes of this study, academic classes were defined as course work that incorporates information in the broad knowledge areas of mathematics, science, history, social studies, humanities and English. Vocational classes are identified as courses which contain curriculum that (1) address specific skills for employment, (2) are vocationally-funded and (3) are generally taught in the Vocational/Occupational/Business Education Department including those that are not vocationally-funded. Examples of classes that are not vocationally-funded typically include: career education, computer technology and speedbuilding.

The rationale for questions in the next section of the questionnaire related to increases, decreases and no changes in enrollment for academic classes and vocational programs. Additional detailed questions were directed toward how these disciplines--academic and vocational--experienced expansion

and reduction and the effects on student demand or interest, staff, budget and block times. Data generated from these questions were used to determine enrollment, staffing and budgeting trends in school districts who responded.

Between 1983 and 1987, the number of academic classes required for graduation increased in 81.5 percent of the districts while vocational classes offered in those same schools experienced a decrease in 38.4 percent of the districts. Overall student enrollment was maintained in 59.6 percent of the school districts surveyed while 40.4 percent witnessed increases in overall student enrollment and 39.7 percent of the school districts experienced no change in their vocational classes offered, based on the responses given. These results are shown in Table 4.

Over eighteen percent of the school districts surveyed experienced no change in the number of academic classes required for graduation while the number of vocational classes offered in these districts saw a 22 percent increase.

The percentages of schools in which enrollments to academic classes increased is presented in Table 5. Nearly 69 percent of these schools experienced academic enrollment increases while the enrollments in the vocational program experienced a decrease in 42.4 percent of the schools. A decrease in 13.2 percent of the schools was evidenced in academic class enrollments as compared to an increase in the

Table 4

Classes Required for Graduation

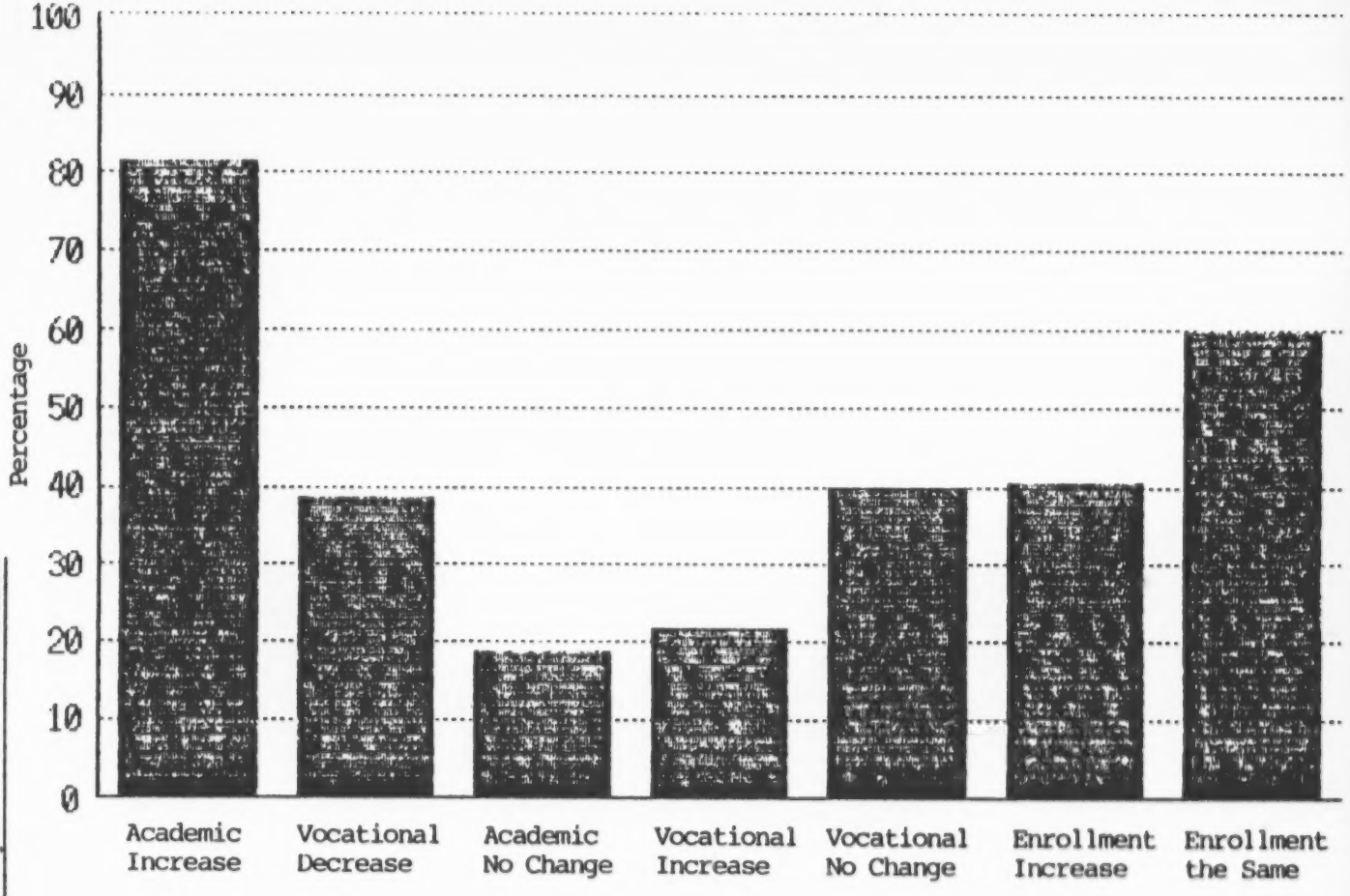
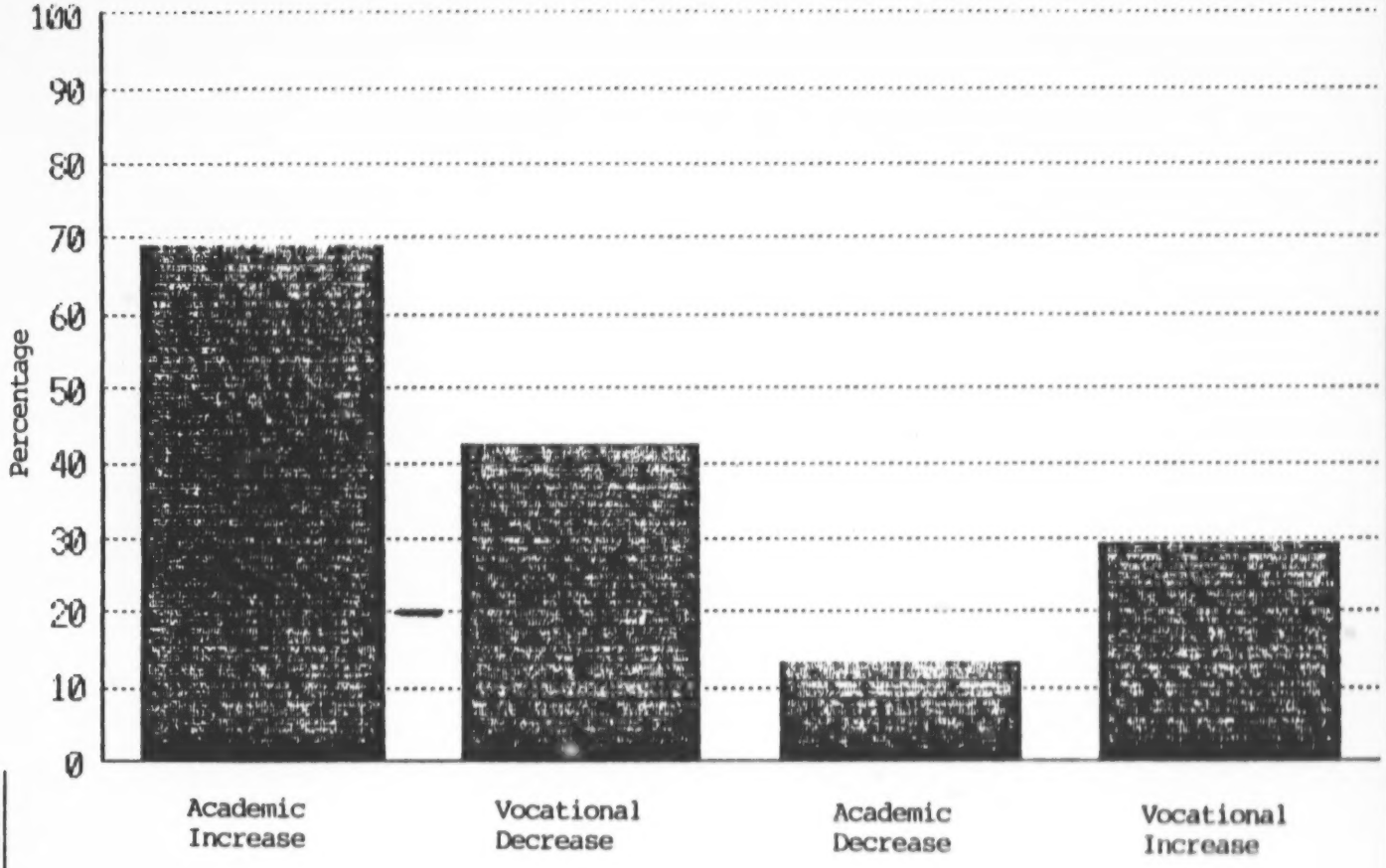


Table 5

Enrollment Trends



vocational program enrollments in 28.5 percent of the schools.

The projections of student demand for both academic and vocational classes for the spring of 1986 are displayed in Table 6. Student demand or interest in total academic classes offered experienced a 49 percent increase as compared to a 28.5 percent increase in student interest for vocational programs. Nearly 7.3 percent of the districts report that student demand decreased for academic classes as compared to a 24.5 percent rate reporting a decrease in demand for courses in the vocational area. Student interest in the academic classes experienced no change in 42.4 percent of the districts and no change in student interest for the vocational program in 47 percent of the districts surveyed.

Academic classes experienced an expansion in 73.5 percent of the districts while vocational programs were reported to be expanded in 35 percent of the districts. Academic subjects sustained reductions in 13.9 percent of the schools while vocational felt a 43 percent reduction. Academic classes found neither an expansion nor reduction in 7.9 percent of the districts surveyed as compared to 14.6 percent in vocational programs experiencing no expansion or reduction. There was a total of 9.9 percent of no responses to this question. Table 7 summarizes these data.

Table 6

Student Demand and Interest

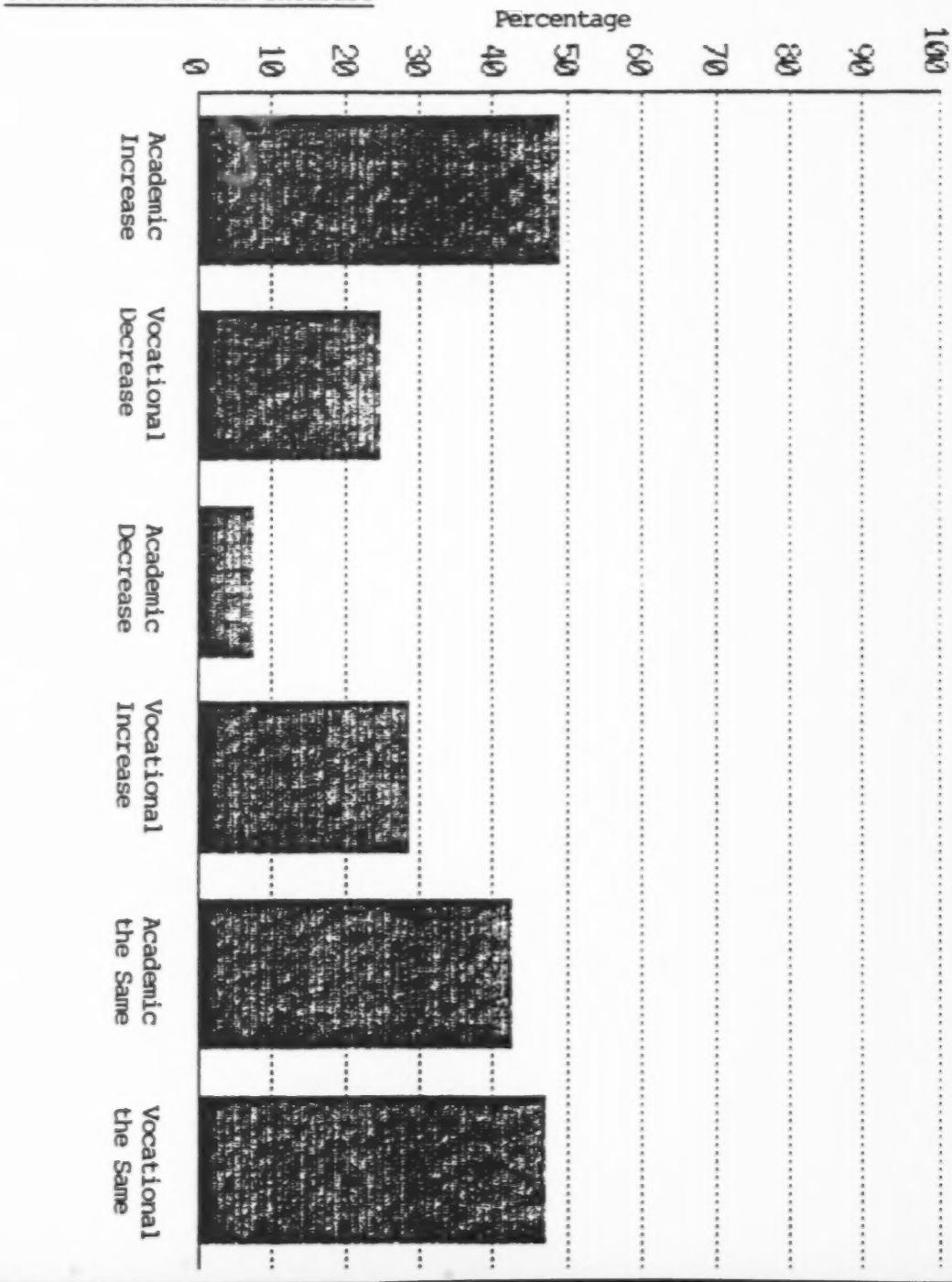
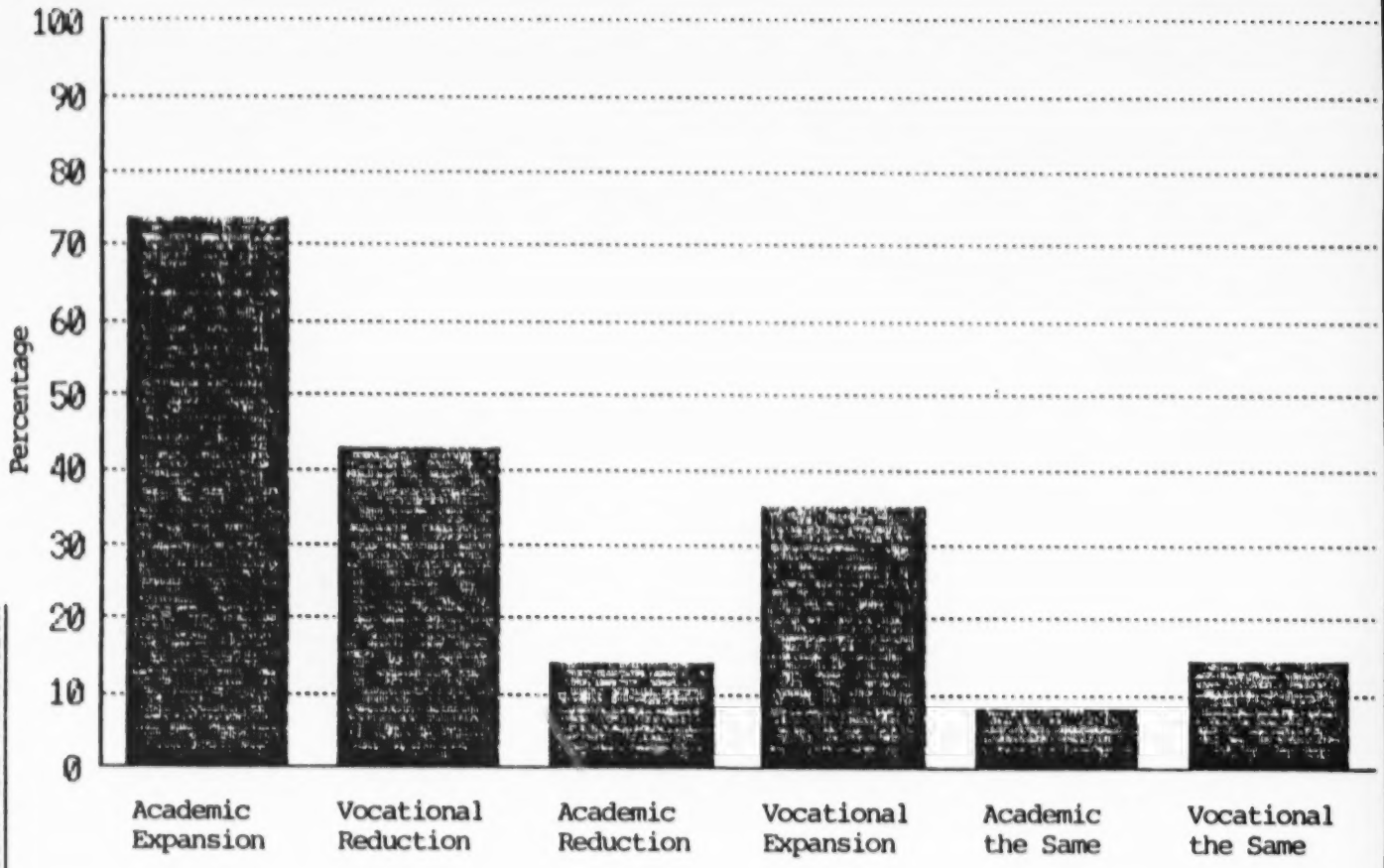


Table 7

Class Expansion and Reduction



Data were also collected on changes that have occurred in Washington school districts since 1983 relative to the hiring of additional teachers. The results are presented in Table 8. When enrollment in academic classes increased, 36.4 percent of the school districts hired more teachers in these subject areas while 59.6 percent did not. Conversely, only 11.3 percent of the school districts hired more teachers when enrollment increased in the vocational program, while 76.2 percent did not. The remaining school districts did not provide data on this topic.

In response to decreases in enrollment in academic classes when they occurred (see Table 9), 13.2 percent of the districts transferred academic teachers to another building or laid them off as compared to 19.2 percent when the vocational program experienced decreased enrollment. When enrollment decreased in the academic areas, 52.3 percent of the respondents said their districts did not transfer or lay teachers off as compared to a 57.6 percent rate in the vocational area. Again there was a relatively high incidence of "no response".

The next question on the survey dealt with increased student enrollment and how it affected the budget. Table 10 demonstrates that in those same school districts where there was an increase in enrollment in academic classes, 43 percent of the school districts reported they increased the budget. This compared to a budget increase in 28.5 percent

Table 8

Increased Enrollment Versus Teacher Hiring

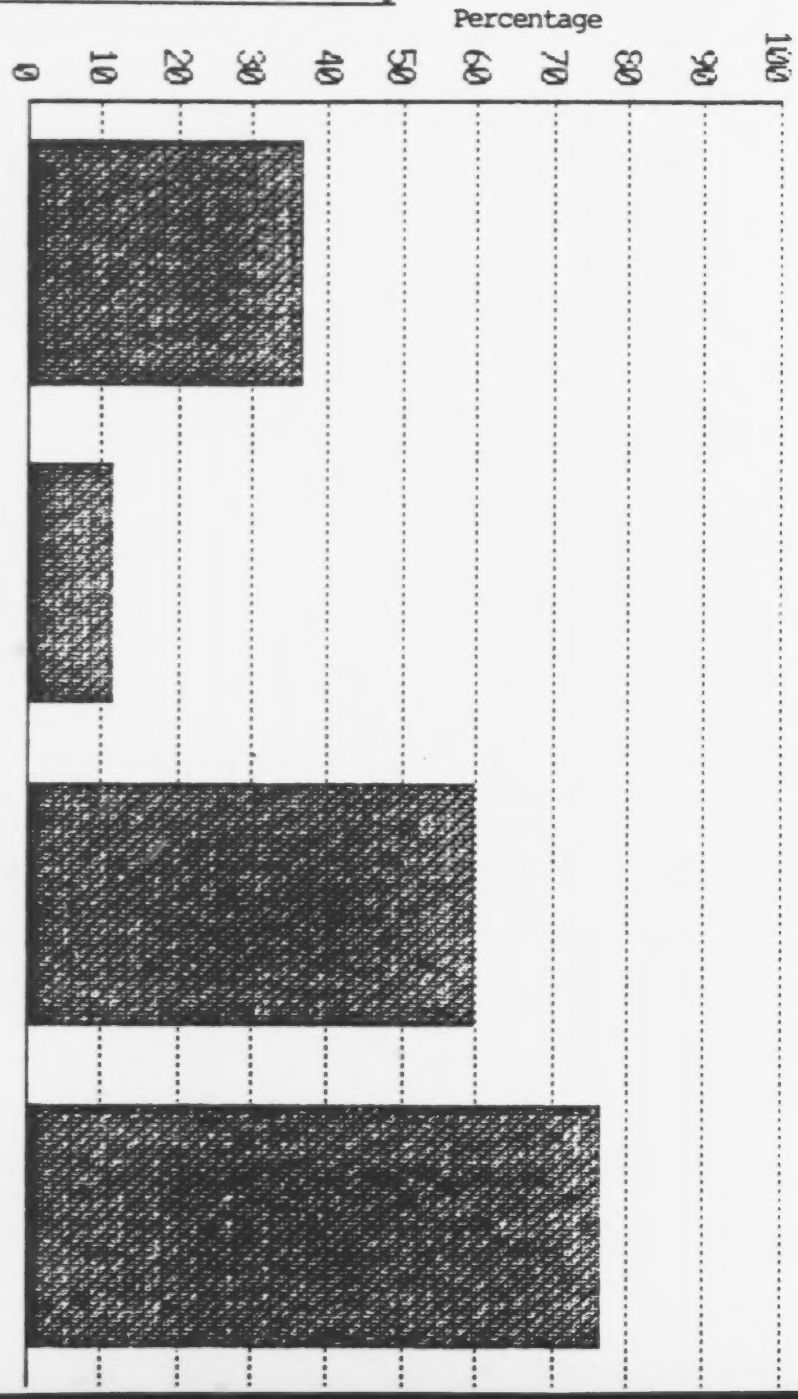


Table 9

Decreased Enrollment Versus Teacher Removal

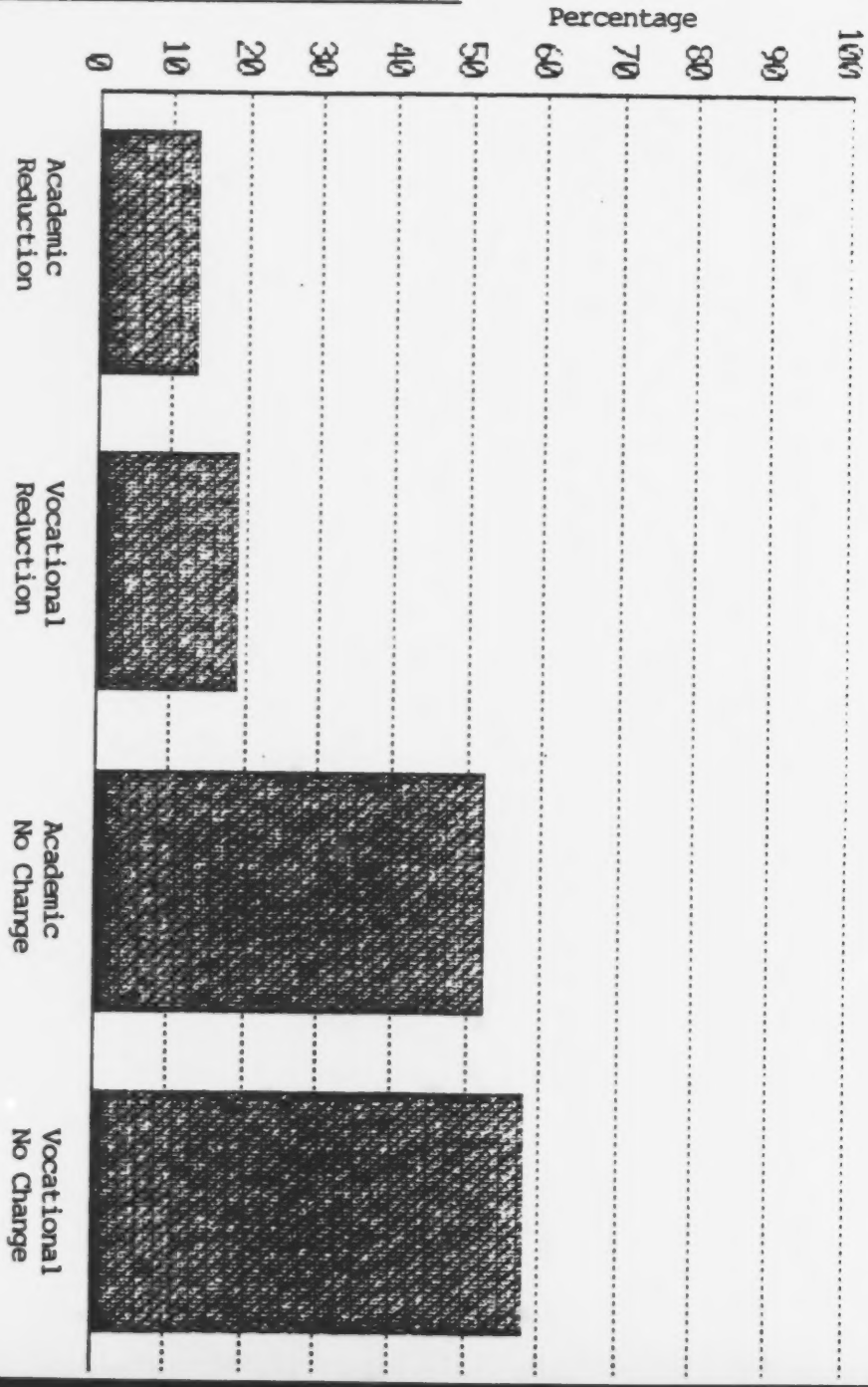
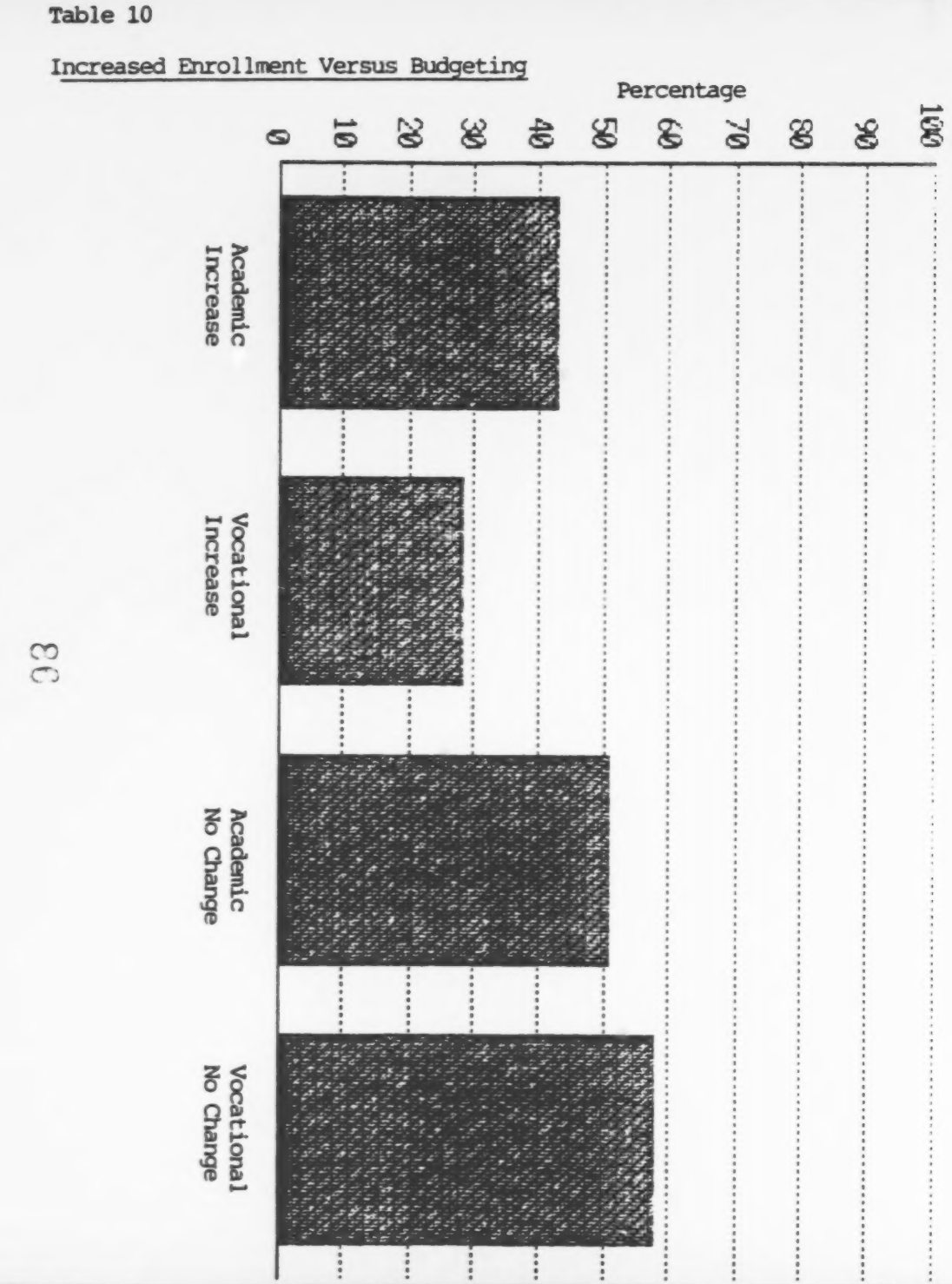


Table 10

Increased Enrollment Versus Budgeting



of the districts when enrollment increases in the vocational programs were reported. School districts did not increase the budget when academic enrollments increased in 51 percent of the cases. This compared to an incidence of 57.6 percent when similar changes occurred in the vocational area. The remaining percentages are accounted for because no responses were provided.

"Block time" can be either a two or three-hour period offered as one class with periods operating back-to-back. In instances where there was an increase in enrollment in the vocational program, 35.8 percent of the school districts kept block times the same while in 27.8 percent of the cases these were changed. However, when there was a decrease in enrollment in the vocational program, 22.5 percent of the school districts reduced the number of courses offered on a block time basis while 42.4 percent did nothing to change these.

Budget/Teacher Ratio Increase or Decrease

Questions in this section of the questionnaire related to the comparison of the budget being increased or decreased based on the number of teacher hirings, lay offs or transfers. This data were necessary to determine the effects of academic versus vocational disciplines in terms of the percentages which were based on enrollment figures.

When enrollments decreased in academic classes, 16.6 percent of the school districts decreased the budget. This compared to 26.5 percent of the districts decreasing vocational budgets when enrollment decreased the vocational programs. Decreased academic class enrollments resulted in 48.3 percent of the districts not decreasing the academic budget as compared to 47 percent of the districts holding the vocational counterpart stationery in light of decreased vocational enrollments. Again there was a relatively high incidence of "no response". See Table 11 for the results of these data.

Of the school districts who responded, there was an average of 1.6 classes added to the graduation requirements. In those same school districts 84.1 percent of the cases did not delete classes from the graduation requirements.

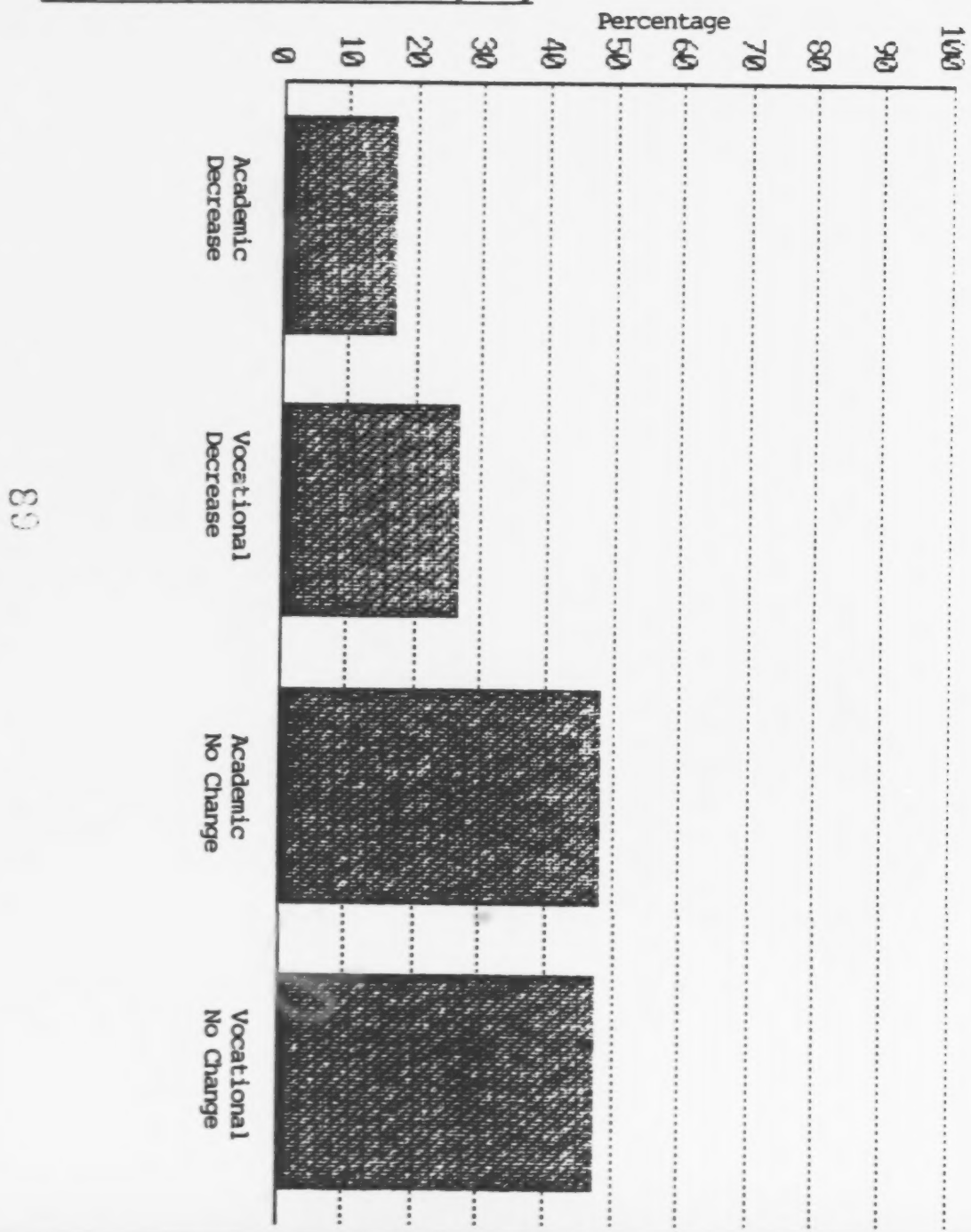
Curriculum Trends

The questions asked in the final section of the questionnaire were valuable responses in which to base future projections and directions for vocational programs as well as the academic disciplines. A number of similar and different curriculum trends in school districts across the state of Washington were evidenced in the data collected.

The academic program of a school is characterized by academic classes in all disciplines. It was discovered by

Table 11

Decreased Enrollment Versus Budgeting



the present survey that the specific classes that had been added to school curricula included a wide variety of course titles. Some examples of these course titles included: (1) Lifetime Sports, (2) Commercial Art, (3) Agricultural Math, (4) Fitness and Food, (5) Family Relations and (6) Electronic Technology (Appendix T).

Additions to academic programs were evenly distributed across mathematics, science, English, social science and foreign language. Of the school districts surveyed 59.2 percent experienced no decrease in any aspect of their academic program. However, there was found to be a decrease in the social studies area in 7.9 percent of the districts and 2.6 percent of the schools reduced thier mathematics offerings. This compared to a decrease in 25.2 percent of the schools in their vocational program. The largest area of decrease in vocational programs was focused in two specializations. Home and Family Life sustained a decrease in 19.1 percent of the schools and Agriculture was decreased in 16.3 percent of the districts. See Table 12 for an illustration of this information.

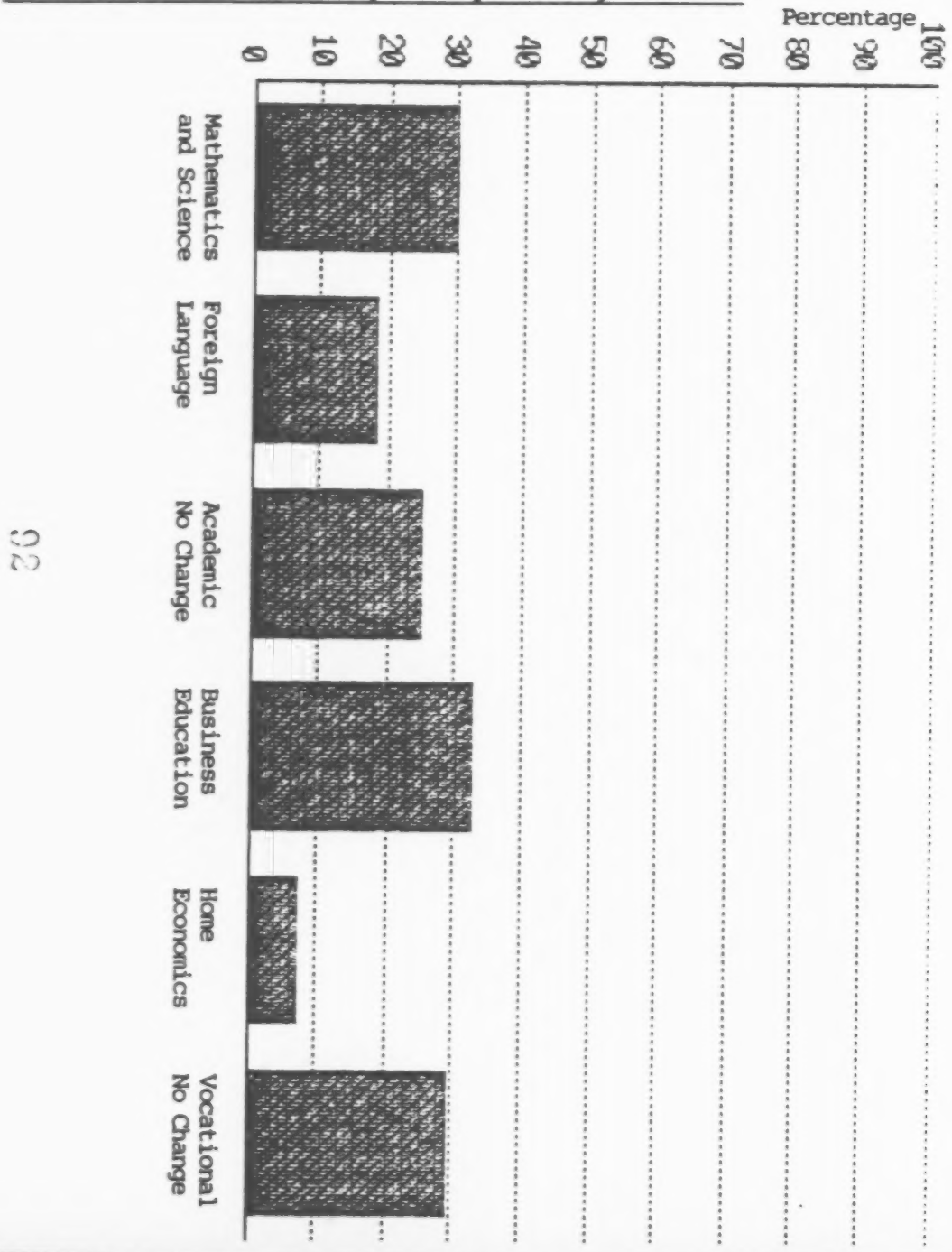
The largest increases were witnessed in two academic areas as charted in Table 13. They were made up of the disciplines of math/science and English/foreign language. Math/Science reported 29.9 percent and English/foreign Lanaguange 18.4 percent of the schools increased in these academic disciplines. In 25.1 percent of the schools no

Table 12

Academic and Vocational Programs Experiencing Decreases

Table 13

Academic and Vocational Programs Experiencing Increases



academic programs experienced an increase while 28.6 percent experienced no increase in the vocational program. The largest increase in vocational programs was in Business and Office Education which showed up in 32.5 percent of the school districts. This program was the one most often increased by a wide margin. The next sizable area of increase which emerged was one of 5.5 percent of the districts in Marketing Education.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND RECOMMENDATIONS FOR FURTHER STUDY

Introduction

This chapter briefly reviewed the problem, summarized the hypothesized results, identified the conclusions based on the research, suggested alternative recommendations and provided recommendations for further research.

Restatement of the Problem

The purpose of this study was to determine the relationship of the effects of increased academic requirements for graduation on public secondary vocational education programs in schools where this has occurred since 1983 in the state of Washington. A review of the literature suggested there had been widespread advocacy for increasing academic (core) requirements because of the educational reform movement in the United States since 1983. It was the intention of this study to examine changes in vocational education which may have attended modification in academic requirements.

A questionnaire was constructed and distributed, after two field tests had been conducted, to all 211 school districts in the state of Washington which had vocational

programs and had increased their high school academic requirements for graduation since 1983. Vocational directors, vocational administrators or other apprpriate or designated school employees of these districts were asked to complete the questionnaire. A response rate of 72 percent was attained through an initial mailing and followup telephoning contact.

Findings

Based on an analysis of the responses from the questionnaire, several findings of the study were of interest.

Although 15 percent of the surveyed schools were three-year (senior high schools) and 85 percent were four-year (traditional) high schools, no meaningful differences in graduation requirements were found to exist between these types. For the purposes of graduation, nearly all Washington school districts function in the capacity of the traditional four-year high school.

The original intent of the investigator was to survey vocational directors because they would: (1) pay attention to detail and have a working knowledge of the types of questions asked; (2) have ready access to enrollment figures; and (3) be able to acquire budget information without a lot of difficulty. Over 60 percent of the respondents had other job responsibilities besides that of the secondary vocational program. Interestingly it was

revealed that in school districts where full-time vocational directors were employed, these people tended to be too busy and often did not have the time to complete the present survey. Although in follow-up telephone contact with these respondents their concern level was evident, they often commented that the questionnaire was too lengthy and required too much factual information.

It was noted that when school districts returned the questionnaire, nearly two-thirds of the respondents wanted to receive a copy of the results of the study when it was completed. It was interesting to note that over one third of the principals who responded were not interested in receiving the results while most vocational directors requested a copy of the results of the study. This reinforced the perception that vocational directors were quite interested in the study.

Turning to the results, nearly thirteen percent of the school districts in the state of Washington had not increased their academic requirements for graduation since 1983. These school districts had an average enrollment of 642 students in their high school and a student poupulation of approximately 2,237 in the school district. There were just as many school districts on the west side of the Cascade mountains as on the east side (the traditional division of the state) who had not increased their academic requirements since 1983. Over 71 percent had only one high

school in the district, and 76 percent of the high schools found in these districts were the traditional four-year senior high schools.

This left 87 percent of the respondent school districts across the state that had increased their academic requirements for graduation since 1983--the year that the first educational reform movement report was published in the United States. These reports have shown an indirect relationship that has impacted public secondary schools across the nation.

Although high schools varied in the number of requirements for graduation, there appeared to be adequate time available for taking vocational education subjects. On the average, over 36 percent of the time remaining during the three or four years that students must be in high school can be devoted to elective options outside of the core requirements.

Cross crediting was evidenced in numerous school districts--nearly 66 percent of them were found to allow the completion of vocational or other courses to substitute for the core academic requirements. This does allow students a little more flexibility in choosing vocational courses rather than academic or college-prep courses.

In school districts across the state, where academic classes, enrollment, or expansion increased, there were often attending decreases in vocational program

enrollments--nearly 40 percent of the cases. Although 40 percent of the respondent school districts did see an increase in overall student enrollment and this should have expanded both academic and vocational areas, vocational programs still often suffered decreased classes offered, student enrollment and reduction of the program.

Across the state both academic and vocational the extent of class offerings maintained at a steady level 60 percent of the time. Conversely, nearly 40 percent of the school's curricula were in the process of changing as academic requirements were being increased. In those school districts that experienced slight decreases in the array of course offerings in academic areas, vocational programs sustained only a slight increase in enrollment.

When respondents were asked for projections based on student demand or interest in the academic and vocational areas, there were predictions of an increase in student interest in taking academic classes in over 49 percent of the schools as compared to predictions of a decrease in interest in the vocational program in 25 percent of the schools.

When enrollment did increase in both academic and vocational areas, more teachers were hired. This ratio was larger than already existed in the school. However, there appeared to be an unproportionate margin of three academic

teachers to one vocational teacher when hirings took place based on enrollment increase.

When block time was addressed in the study, a decline was evidenced for the elimination of block times offered to students who were able to take two and three hours of an identified vocational program. When enrollment increased in the vocational program, block times remained the same 35.8 percent of the time. However, when enrollment decreased, over 22 percent of the school districts who responded decreased block times. Nearly 51 percent of the school districts surveyed no longer use block times, consequently this question was not relevant to a number of school districts across the state.

When enrollment decreased in either the academic or vocational area, over 13 percent of the districts transferred teachers or were laid off in the academic area as compared to over 19 percent of the teachers in the vocational area--nearly a two to one margin.

Budget increases and decreases found many school districts leaving the budget as it was, with no increase or decrease in either program.

All academic areas, understandably so, had large increases in student enrollment. Mathematics, science, English, social science and foreign language each increased proportionately. There were nearly 8 percent of the school

districts surveyed experiencing decreases in the social studies area. This could have been due to school districts who accepted the largest percentage of cross crediting in the social sciences discipline.

Business and Office Education showed an extremely high increase in student enrollment--in over 32 percent of the districts--which was probably due to those school districts who have forged ahead and brought their Business departments up to date with the latest in technology and computer applications. Marketing Education also experienced increases in enrollment. Home and Family Life and Agriculture experienced a decrease in course offerings in over 35 percent of the districts across the state.

Recommendations and Discussion

Several recommendations were made and directed to vocational education directors and/or administrators, principals and school district personnel alike. These recommendations address what can be done to maintain or increase the enrollment in vocational education programs in spite of the increased academic requirements.

Recommendation #1: Institute cross-crediting. The purpose of secondary vocational education programs need to be joined together while at the same time highlighting the overall mission of the school. Emphasis should be placed on a strong recognition of the need to balance the academic and

vocational programs based on policies and/or guidelines for providing cross credit. Vocational teachers as well as general education teachers must broaden their views of vocational education. An attempt should be made to balance the academic and vocational programs.

It is recommended that adapting vocational programs to provide cross-crediting as academic classes be done. Integration of vocational and academic curriculum and better articulation between the philosophies underlying vocational and academic schools of thought would greatly benefit both. In those districts (over 34 percent) that do not allow cross crediting, it may become increasingly difficult for the student who is not interested in taking four years of mathematics, science and English. These students will be required to take all this course work in the academic area.

The caliber of vocational students must be improved academically with an increase of both written and verbal skills' expectations by vocational teachers. Therefore, there must be closer cooperation and less distinction between vocational and academic subjects. Vocational instructors will need to work closely with academic teachers to transmit basic and practical skills and knowledge as they relate to academic subjects. Interpretation and communication of basic education can and should be accomplished through vocational courses as well as through academic courses. Basic skill areas need to be integrated

within the vocational program areas and general education competencies emphasized in vocational programs.

Restructuring classes and changing norms with regard to affective skills should also be incorporated into vocational classrooms. Streamlining, redesigning for broader appeal, revising and sequencing programs across all areas of vocational education should be addressed. Reviewing the scope and sequence of all vocational curricula in regard to general, basic student learning objectives is critical and should be given the highest priority.

Recommendation #2: Improve instructional skills. The instructional skills and competencies of vocational teachers must be expanded to incorporate both the background in practical methodology as well as basic skills teaching. The overriding theme for success in vocational education is strong instructional skills combined with strong program elements. Instruction is the key; vocational educators must be challenged to do a better job of teaching. In the presence of good teachers, vocational programs will survive no mattter what academic requirements are instituted.

It is recommended that vocational teachers become more creative and unique in their presentation style and that they actively compete for students while at the same time making their programs more appealing to students. The teacher's attitude is a critical variable. Teachers are being challenged to do a better job of teaching; they will

have to be flexible, have higher expectations, be willing to work on program renewal, have good human relation skills and be able to relate well with students to attain this goal. These programs must be dynamic to survive, become relevant to the world of work and insure that training leads students to jobs.

Recommendation #3: Recruit students more intensely. Attention needs to be given to the more intense recruitment of quality students whether these students are identified as college-bound or non-college bound. Marketing for acquiring and holding student enrollment must be recognized as a major responsibility of the vocational instructor. Quality programs must be promoted; better press coverage and advertising of vocational programs must take place; improved publicity measures should be attained; and all of this must be marketed in a more effective fashion. Increased attention to attracting students and influencing students toward selecting vocational programs must take place.

Marketing directed to underclassmen--beginning in junior high school with a greater emphasis on career education at the lower grade levels is imperative. Promotional tapes and other recruitment techniques for getting information to parents is suggested. Preparing more attractive course catalogs and orientation presentations would help.

Utilizing advisory committees, teacher promotions of their classes, the continuation of vocational clubs with high visibility which makes the program appealing to students are all viable ways of highlighting vocational education and thus attracting students. Providing general information to educators and the public are also recommended as ways to increase or maintain secondary vocational education enrollments.

Recommendation #4: Improve the curriculum. Meaningful changes in course offerings and instructional strategies should take place to make time available for vocational education subjects. Improved curriculum and instruction to meet the needs of the twenty-first century with an emphasis on work attitudes versus training for specific skills must be considered. General applicability skills that can be used in any type of job will need to be identified and addressed while focusing less intensive training and looking toward generalizable skills. Upgrading curriculum and a better quality of it is necessary.

Technology will continue to be an important element in the future in all vocational programs and will need to be expanded. Technology curriculum will have to be implemented providing the students with a worthwhile and expanded learning environment for a better quality of education. Expansion of the technological aspect of vocational education will be an important element in all vocational

programs. It is recommended that classes like Principles of Technology be designed and implemented so that a move to high-tech levels can take place.

Stressing higher thinking skills and teaching reasoning and technological applications should become a part of the vocational education curriculum. A higher reliance on computer technology and career exploration in this area should be anticipated and thus put in place in secondary programs.

Teaming with special education is also vital. Emphasis toward placing disadvantaged, handicapped and "at-risk students" in the vocational program should be addressed. Low-level courses for service trades are needed.

Using new, innovative scheduling along with imaginative and practical course offerings are other changes recommended. Extending the school day by an additional period to allow students to take an additional elective is another option.

Other possible recommendations include (1) requiring vocational courses for students each year, (2) offering classes on alternate years, (3) providing multiple classes in the same period and (4) restructuring of sequences of vocational classes.

Recommendation #5: Planning is the key. Vocational counseling and vocational participation in prescription scheduling is necessary and needed. Counseling students

toward a career goal and helping them realize the usefulness of the community college system to meet four year school entrance requirements if plans change. Increase career guidance and course planning to provide solid information to students. Better career counseling and stronger exploration for students is also recommended.

Working with the county in economic and business development is suggested by revising and streamlining programs to comply with new job market trends to match closer with the expectations of industry. Teach students about how to operate a business (i.e., entrepreneurship). Update equipment to meet business demands while making changes in traditional requirements such as Home and Family Life and Metals.

Block hour times will have to be deleted thus offering students options in one semester classes rather than year long programs. Students will no longer have time to complete two and three hours a day in the vocational program whether they are interested in attending college or not. Their high school requirements will dictate their schedule to a high degree.

Recommendation #6: Modify teacher preparation programs. Vocational Teacher Education must be reformed to prepare vocational teachers to be more well-rounded in their undergraduate schooling. Institutions of higher education will have to modify vocational teacher training programs to

produce technology-oriented teachers with skills in the areas of computing, teaching conceptual and abstract thinking skills, and on instructional designs how to incorporate the basics into the vocational classroom.

Vocational education is a delivery system for basic education knowledge. There will have to be an emphasis of mathematics and language arts in the vocational curriculum and teachers must be held accountable for teaching the application of basic skills. All teachers should be responsible for basic skills whether they teach them or not. The vocational teacher must be prepared for this via the college preparation program.

Recommendations for Further Study

Recommendations for further research in this area are offered to those who may wish to extend the present study. These suggestions are based on the implications of the findings of the study as they appear to the investigator.

It has been reported recently that dropout rates in American high schools are on the increase. Future research might be conducted to determine if these dropout rate increases are due to increases in high school academic graduation requirements. A question that could be addressed would be, "Does restoration of general education or increased emphasis on vocational education impact the dropout rate?" The push for "excellence" often ignores the

value of vocational education. If dropout rates rise, "Will there be a hard push back to vocational education?" and "How is the academic achievement of non-college bound students affected in instances where cross-crediting has been instituted?" are questions for future research. The dropout rate will likely have to be closely monitored over the next three to five year period to determine if the search for excellence has impacted it positively or negatively.

Future research should include the "At Risk Student." As this theme takes hold, "Will vocational education again be recognized as a viable approach?" "How has vocational education assured and provided sound academic basics in their classes and programs?"

Future research should focus on vocational and general education's need to communicate and cooperate better in the interest of both programs. "How will the cross crediting of courses affect both programs? and Will a working relationship be established between these programs to determine the necessary curriculum to put in place to meet the expectations of cross credit?"

Further research should be conducted in the area of changing technology and should address the question, "How will the new technology affect the vocational education teacher and their classrooms?". This area of research should focus on how vocational education needs to be more

conceptual, more encompassing and cover high-tech areas, such as laser technology.

Summary

This chapter identified the problem, summarized the findings from the study conducted, made recommendations based on implications from the findings of the study, and concluded with recommendations for further research in the area of increased academic requirements for graduation and their effects on secondary vocational education programs.

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Appendix A

Request Letter

3201 Northeast 92 Street
Seattle, WA 98115
February 12, 1987

Lake Washington Vocational Technical Institute
Attention: Dr. Don Fowler, WAVA President
11605 - 132 Northeast
Kirkland, WA 98034

Dear Dr. Fowler

I am currently in the process of conducting research for a dissertation study to be completed in the State of Washington. The research is focusing on the increase of academic requirements and their effects on secondary vocational education programs. I have included an Abstract of the research to better describe the significance to both vocational educators and the public school system.

The field test of the questionnaire has been completed in both the States of Nevada and Oregon with a 100 percent response rate. My goal would be to seek a 100 percent response rate from the State of Washington as well.

Is it possible to have the endorsement of your professional organization, the Washington Association of Vocational Administrators? Co-sponsorship of the questionnaire would help in the response rate, importance, and credibility of the research study.

I have enclosed a copy of a letter from Dr. Frantz requesting my participation at the AVA Conference in December regarding this research. Also, you will find copies of the questionnaire that has been field tested.

I would be more than happy to meet and discuss this request with you in person. I will be mailing my questionnaire to the vocational directors in Washington by the end of this month.

I look forward to hearing from you soon. My office phone number at Seattle Central Community College is 587-3830 and my home phone number is 523-1205.

Sincerely

Ms. Wendy M. Smith
University of Nevada Doctoral Candidate

wms

enc Abstract
Points of Clarification Handout
1986-87 High School Graduation Requirements Survey
Dr. Nevin R. Frantz, Jr. Letter

cc UNLV Doctoral Advisory Committee

wava
Washington Association of
Vocational Administrators

Dr. Donald W. Fowler, President
11605 132nd N.E.
Kirkland, Washington 98034
(206) 828-5601

Karen Hansen, President Elect
Patricia E. Deal, Secretary
Gerald Cummins, Treasurer
Pauline Anderson, Past President

March 24, 1987

Ms. Wendy M. Smith
3201 NE 92nd Street
Seattle, WA 98115

Dear Ms. Smith:

Members of my staff and I have reviewed the research study which will be used for your doctoral dissertation. I have also discussed it with the executive board of the Washington Association of Vocational Administrators.

The purpose of this letter is to endorse your project, and to wish you success as you continue to pursue your doctorate.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Donald W. Fowler, Ed.D.
President, 1986-87

Appendix C

Field Test Cover Letter

3201 Northeast 92 Street
Seattle, WA 98115
January 11, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

You have been selected to participate in a field test group for a study that will be conducted in the Spring of 1987. The enclosed questionnaire is a tentative survey instrument that has been developed for use in the study.

The instrument is designed to collect data which will allow me to determine the effects of the increased academic requirements for graduation on secondary vocational education enrollment. The potential value of the research for planning the future of secondary vocational education programs is great.

Would you please carefully complete and evaluate the questionnaire and the Points of Clarification handout (which will accompany the questionnaire) and make any suggestions that would be pertinent and useful for the effectiveness of the questionnaire. Thus, your goals are twofold: (1) complete the questionnaire based on your 1986-87 school year and (2) examine the questionnaire and make recommendations on the questions asked, the clarity of the questions, the organization of the questionnaire and any other information which would be beneficial for the final questionnaire and Points of Clarification handout to be distributed in the Spring.

Your input is essential and I encourage you to make any comments, corrections, or suggestions you would care to that may help me improve the questionnaire and its clarity. Of course, the information you provide will remain confidential.

May I ask you to mail this field test instrument by April 20th? If you would like to discuss any part of the questionnaire with me, please feel free to call me collect at (206) 523-1205.

Sincerely

Ms. Wendy M. Smith
University of Nevada/Las Vegas, Doctoral Candidate

wms

enc Points of Clarification Handout
1986-87 High School Graduation Requirements Survey
Stamped/Addressed Envelope

cc UNLV Doctoral Advisory Committee

Appendix D

Phone Contact Sheet

School District: _____

Vocational Director: _____

Other: _____ Title: _____

Work Phone Number: _____ Home Phone Number: _____

	Date	Day	Time	Work No.	Home No.
1st Contact Response:					
2nd Contact Response:					
3rd Contact Response:					
4th Contact Response:					
5th Contact Response:					
6th Contact Response:					
7th Contact Response:					
8th Contact Response:					
9th Contact Response:					
10th Contact Response:					

1st Questionnaire Mailed:____ 2nd Questionnaire Mailed:____

3rd Questionnaire Mailed:____ 4th Questionnaire Mailed:____

Questionnaire Received: _____

(Phone Abbreviations)

B = Busy
LM = Left Message
RC = Returned Call
NA = No Answer

Appendix E

Follow-up Field Test Letter

3201 Northeast 92 Street
Seattle, WA 98115
January 25, 1987

Place of Employment
Name of Person
Job Title
Street Address
City, State, Zip Code

Dear (Name of Person)

I have enclosed another questionnaire and Points of Clarification Handout for your critiquing. You will also find the original letter which describes in detail the instructions for analyzing the questionnaire and accompanying handout.

You do not have to complete the questionnaire as this is a field test to determine whether or the not the questions are clear, the information is in an organized format, and the questions are pertinent to the respondent's school district. Please make suggestions on the Points of Clarification handout as well.

It would be greatly appreciated if you could mail the questionnaire by January 31. Feel free to phone me collect if you have further questions regarding your input at (206) 523-1205.

Sincerely

Ms. Wendy M. Smith
UNLV Doctoral Candidate

wms

enc Questionnaire
Points of Clarification Handout
January 11th Letter
Stamped/Addressed Envelope

Appendix F

Thank You Field Test Letter for Results

3201 Northeast 92 Street
Seattle, WA 98115
February 5, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

Thank you for completing the "1986-87 High School Graduation Requirements Survey." Your input is vital in order to compile the findings which will be developed from the results of this survey for the state of Washington.

When the study is completed this spring, you will receive a copy of the results of the research. Thank you again for your response.

Sincerely

Ms. Wendy M. Smith
University of Nevada, Doctoral Candidate

wms
cc UNLV Doctoral Advisory Committee

Appendix G

Request Letter

3201 Northeast 92 Street
Seattle, WA 98115
January 31, 1987

Oregon Department of Education
Attention: Evelyn Acken
700 Pringle Parkway Southeast
Salem, OR 97310-0290

Dear Evelyn

Thank you so much for your help with the listing of the vocational directors for Oregon. Your office sent mailing labels of the Oregon vocational directors which greatly helped in the mailing of the questionnaires.

I had telephoned you to inquire whether or not it was possible to receive the individual names of all the vocational directors in Oregon. If you do not have ready access to this information, I do not want to inconvenience you for the list.

Thank you again for your help! Hopefully the field test I am conducting in your state will prove reliable and valid.

Sincerely

Ms. Wendy M. Smith
University of Nevada Doctoral Candidate

wms

cc UNLV Doctoral Advisory Committee

Appendix H

Thank You Field Test Letter for No Results

3201 Northeast 92 Street
Seattle, WA 98115
February 5, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

Thank you for completing the "1986-87 High School Graduation Requirements Survey." Your input is vital in order to compile the findings which will be developed from the results of this survey for the state of Washington.

If you would like to receive a copy of the results of the research when it is completed this Spring, please contact me at the above mailing address. Thank you again for your response.

Sincerely

Ms. Wendy M. Smith
University of Nevada, Doctoral Candidate

wms
cc UNLV Doctoral Advisory Committee

Appendix I

Test-Retest Letter

3201 Northeast 92 Street
Seattle, WA 98115
February 28, 1987

Name of School District
name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

Thank you again for your first response to the field test instrument of the 1986-87 High School Graduation Requirements Survey. A group of fifty school districts in the State of Oregon were selected as the sample population.

The final step in this process of testing the instrument is to establish Test-Retest reliability with the same population originally surveyed. The first distribution of the questionnaire was returned with only minor suggestions made for its format. The content has remained the same since no suggestions or revisions were made by your field test group.

You will find another 1986-87 High School Graduation Requirements Survey and Points of Clarification handout enclosed for your final approval. Would you please initial one of the boxes below indicating your response and return this letter in the enclosed envelope?

_____ The minor revisions made to the questionnaire would not affect the response of my answers. The first questionnaire completed will remain the same.

_____ The minor revisions made to the questionnaire will affect my responses. I will complete the questionnaire again and mail it by March 10.

It would be greatly appreciated if you could mail the letter and/or questionnaire in the enclosed stamped envelope by March 10. Thank you for participating in the Test-Retest of this instrument to determine the degree of consistency.

Sincerely

Ms. Wendy M. Smith
University of Nevada Doctoral Candidate

wms
enc 1986-87 High School Graduation Requirements Survey
Points of Clarification Handout
Stamped/Addressed Envelope
cc UNLV Doctoral Advisory Committee

Appendix J

Survey Cover Letter

3201 Northeast 92 Street
Seattle, WA 98115
March 14, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

I have designed a research study which will be used for my doctoral dissertation. The purpose of this study is to determine the effects of increased academic requirements for high school graduation and the impact on secondary vocational education programs in the state of Washington.

You have been selected to participate in the study on the effects of the increase of academic requirements because your school district has increased graduation credits since 1983. The potential value of this survey research for planning future secondary vocational education programs in the state of Washington is great. A better understanding of the impact of increased academic requirements for graduation on vocational programs promises to be helpful in addressing the need for new strategies in vocational education.

Your response will be treated as confidential and is important and necessary in order to compile valid and reliable findings for the state of Washington. It is important your response be as accurate as possible to insure the results are useful.

This study addresses a state-wide issue for the profession and your input is crucial in determining the findings. Your completion of the questionnaire and return in the enclosed, stamped envelope mailed by March 27 would be greatly appreciated.

Sincerely

Ms. Wendy M. Smith
University of Nevada, Doctoral Candidate

wms

enc Points of Clarification Handout
1986-87 High School Graduation Requirements Survey
Stamped/Addressed Envelope

cc UNLV Doctoral Advisory Committee

Appendix K

1986-87 High School Graduation Requirements Survey

School District: _____ County: _____

Three-Year High School: _____
Four-Year High School: _____

Person Completing the Questionnaire: _____

Job Title: _____

I. Directions: Please fill in or check the blank for the appropriate response requested. It is necessary you refer to the Points of Clarification handout for a definition of terms if you are unclear of the meanings used for the purposes of this survey.

A. _____ What year or years were the academic requirements to earn a high school diploma increased in your school district?

B. _____ Total number of units required to earn a high school diploma (1986-87)

C. _____ Total number of academic units (excluding electives) required to earn a high school diploma (1986-87)

II. Directions: Please check the blank for the appropriate response.

A. _____ Yes, our school district does allow cross crediting (Please see attached Points of Clarification handout) of classes to fulfill graduation requirements. The names of these courses are:

_____

_____

B. _____ No, our school district does not allow cross crediting of classes to meet graduation requirements.

III. Directions: Please complete each of the questions in this section by checking the appropriate blank for the 1986-87 school year unless otherwise indicated.

A. Has the number of academic classes required for graduation experienced
_____ an increase
_____ a decrease
_____ no change

B. Has overall student enrollment in your school district increased?
_____ yes
_____ no

C. Has the number of vocational classes offered experienced
_____ an increase
_____ a decrease
_____ no change

D. Has enrollment in the academic classes experience
_____ an increase
_____ a decrease
_____ no change

E. Has the enrollment in the vocational program experienced
_____ an increase
_____ a decrease
_____ no change

F. Based on the projections from the spring of 1986, has student demand or interest in academic classes experienced
_____ an increase
_____ a decrease
_____ no change

G. Based on the projections from the spring of 1986, has student demand or interest in the vocational program experienced
_____ an increase
_____ a decrease
_____ no change

H. Have academic classes experienced
_____ expansion?
_____ reduction?

I. Has the vocational program experienced
_____ expansion?
_____ reduction?

J. In regards to the increase in enrollment in academic classes,
1. have more teachers been hired?
_____ yes
_____ no
2. has the budget increased?
_____ yes
_____ no

K. In regards to the increase in enrollment in the vocational program,
1. have more teachers been hired?
_____ yes
_____ no
2. has the budget increased?
_____ yes
_____ no
3. have two and three hour block times remained the same?
_____ yes
_____ no

L. In regards to the decrease in enrollment in academic classes,
1. have teachers been laid off or transferred to another building?
_____ yes
_____ no
2. has the budget been decreased?
_____ yes
_____ no

M. In regards to the decrease in enrollment in the vocational program,
1. have teachers been laid off or transferred to another building?
_____ yes
_____ no
2. has the budget been decreased?
_____ yes
_____ no
3. has there been a reduction in the number of courses offered for two and three hour block times?
_____ yes
_____ no

IV. Directions: Please complete each of the questions in this section by filling in the correct number for the 1986-87 school year unless otherwise indicated.

A. How many classes have been
_____ added to the graduation requirements?
_____ deleted from the graduation requirements.

B. What percentage of the budget increased for
_____ academic classes?
_____ vocational classes?

C. What percentage of the budget decreased for
_____ academic classes?
_____ vocational classes?

D. What percentage of teachers have been hired for
_____ academic classes because of increased enrollment?
_____ vocational classes because of increased enrollment?

E. What percentage of teachers have been removed from
_____ academic classes because of decreased enrollment?
_____ vocational classes because of decreased enrollment?

V. Directions: Write in your responses for the following questions for the 1986-87 school year unless otherwise indicated.

A. What classes have been added to the school's curriculum?

_____

_____

B. What classes have been deleted from the school's curriculum?

_____

_____

C. What academic program experienced the

largest increase? _____

largest decrease? _____

D. What vocational program experienced the

largest increase? _____

largest decrease? _____

E. In your opinion list the major changes vocational education programs will experience in the next few years because of the increase of academic requirements?

_____

_____

F. In your opinion do you believe academic and vocational education is currently being viewed differently by the general public because of the new educational reforms currently taking place? Please support your response.

_____

_____

G. What has your school district proposed as a means of maintaining or increasing enrollment and generating new programs in vocational education?

_____

_____

H. Please comment on any particular opinions or trends you anticipate in the vocational education field in the next five years.

_____

_____

Signature (Optional) _____ Date: _____

_____ Yes, I would like a copy of the results of this study.

_____ No, I am not interested in receiving a copy of the results.

Please return this questionnaire in the enclosed addressed/ stamped envelope to:

Wendy M. Smith
3201 Northeast 92 Street
Seattle, WA 98115

Appendix L

Points of Clarification

Overview of Questionnaire

The following items should assist you in completing the enclosed questionnaire. However, if you are unclear about any of the items requested for your response, please call me collect at (206) 523-1205.

A stamped-addressed envelope has been enclosed for your convenience to return your questionnaire. Your assistance in completing this survey by the due date would be greatly appreciated.

If you are interested in receiving a copy of the results of this study, please check the appropriate box at the end of the questionnaire. The survey should take approximately 25 to 30 minutes of time from your schedule.

Definition of Terms

High School Diploma: Base your responses on the requirements for earning a "regular" high school diploma in your school district. Use your school district's definiton of academic credit when answering questions.

Academic Classes: These are classes which teach information in the broad knowledge areas of mathematics, science, history, social studies, humanities and English. In other words, these are classes that make up the entire school curriculum.

Vocational Classes: These courses are identified as classes which teach specific skills for employment, are vocationally-funded and are generally taught in the Vocational/Occupational Education Department (not vocationally-funded). Examples of classes that are not vocationally-funded typically include: Career Education, Keyboarding, Computer Technology and Speedbuilding.

Cross Crediting Classes: Sometimes classes are given both academic and vocational dual credit. Classes given dual credit

(or cross credit) should be considered as vocational courses. Do not include the count of cross-credited classes in <u>both</u> academic and vocational programs.

Academic Program: This program is identified by the makeup of all academic classes from all disciplines.

Vocational Program: This program is identified by the makeup of all vocational classes that are taught as part of the vocational education department curriculum.

Block Time: This amount of time can be either a two or three-hour period that is offered as one class with periods operating back-to-back.

Appendix M

Incomplete Survey Response Request Letter

3201 Northeast 92 Street
Seattle, WA 98115
Current Date

Name of School District
Attention: Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

I have enclosed your original survey that you mailed to me last week. The first page was left blank and it is needed information in order to use your school district in my study.

I tried calling you a couple of times to acquire the answers over the phone, but was unable to locate you. I would appreciate it if you could complete the first page and mail the survey in the enclosed envelope by April 5th.

Thank you for your patience in this matter. If you have any questions, please do not hesitate to call me collect at (206) 523-1205.

Sincerely

Ms. Wendy M. Smith
University of Nevada, Doctoral Candidate

wms
enc "1986-87 High School Graduation Requirements Survey"
Stamped/Addressed Envelope
cc UNLV Doctoral Advisory Committee Members

Appendix N

Follow-up Survey Cover Letter

3201 Northeast 92 Street
Seattle, WA 98115
March 28, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

I have not yet received your responses to the survey form I mailed to you on March 15. In case you have misplaced the previous form, I am enclosing another "1986-87 High School Graduation Requirements Survey". Please mail this survey by April 4. Of course, your responses will remain confidential.

Since my last communication with you, the Washington Association of Vocational Administrators has endorsed my project. Also, I have been asked to participate in a symposium at the American Vocational Association Conference in December to present the findings of this research.

It is my attempt to insure the highest possible return on the survey and would appreciate greatly your direct attention to completing and returning it. Your consideration and prompt return would be of great value to me. Thank you for your valuable contribution.

Sincerely

Ms. Wendy M. Smith
University of Nevada, Doctoral Candidate

wms
enc WAVA Endorsement Letter
Virginia Tech Request Letter
Points of Clarification Handout
"1986-87 High School Graduation Requirements Survey"
Stamped/Addressed Envelope
cc UNLV Doctoral Advisory Committee Members

VIRGINIA TECH

Division of Vocational &
Technical Education

January 5, 1987

College of Education
Blacksburg, Virginia 24061

Ms. Wendy M. Smith
800 Starks Drive
Las Vegas, NV 89107

Dear Ms. Smith:

I hope that your doctoral study is progressing as planned and you will be completing your degree on schedule. I am finding that there is a great deal on interest around the country about the impact of graduation requirement increases on vocational education enrollments.

As a result of this interest, I am planning to develop a proposal for a symposium on the impact of graduation requirements on vocational education enrollments. I am inviting other individuals to be a part of the panel and present the findings of their research on the topic. I would like to have you participate in the symposium, if you are interested. The proposal would be sent to the program chairman of the American Vocational Education Research Association for consideration as a part of their activities during the American Vocational Association Conference to be held in Las Vegas, Nevada in December. If you are interested in the possibility, please let me know and give me a synopsis of what you might present about your research. Please feel free to call me at (703) 961-6384 if you would like to discuss the proposed symposium in further detail.

I'll be looking forward to hearing from you at your earliest convenience. Best wishes for continued success as you completed your degree.

Sincerely yours,

Nevin R. Frantz, Jr.
Division Director

ph

Appendix P

Thank You Questionnaire Letter for Results

3201 Northeast 92 Street
Seattle, WA 98115
March 25, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

Thank you for completing the "1986-87 High School Graduation Requirements Survey." Your input is vital in order to compile the findings which will be developed from the results of this survey for the state of Washington.

When the study is completed this spring, you will receive a copy of the results of the research. Thank you again for your response.

Sincerely

Ms. Wendy M. Smith
University of Nevada, Doctoral Candidate

wms
cc UNLV Doctoral Advisory Committee

Appendix Q

Survey Response Letter

3201 Northeast 92 Street
Seattle, WA 98115
May 1, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

Enclosed you will find a summary of the research findings from the survey conducted this spring. The survey was entitled, "1986-87 High School Graduation Requirements."

The survey was designed to determine the effects of increased academic requirements for graduation on secondary vocational education programs in the state of Washington. The results of this dissertation study are summarized for the purposes of this mailing only.

If you would like further information regarding this dissertation, please do not hesitate to contact me at the above mailing address. Thank you again for your response and participation in this study.

Sincerely

Ms. Wendy M. Smith
UNLV Doctoral Candidate

wms
enc Survey Findings Summary
cc UNLV Doctoral Advisory Committee Members

Appendix R

Thank You Questionnaire for No Results

3201 Northeast 92 Street
Seattle, WA 98115
March 25, 1987

Name of School District
Name of Vocational Director/Administrator
Job Title
Street Address
City, State, Zip Code

Dear (Name of Vocational Director/Administrator)

Thank you for completing the "1986-87 High School Graduation Requirements Survey." Your input is vital in order to compile the findings which will be developed from the results of this survey for the state of Washington.

If you would like to receive a copy of the results of this research when it is completed this Spring, please contact me at the above mailing address. Thank you again for your timely response.

Sincerely

Ms. Wendy M. Smith
University of Nevada, Doctoral Candidate

wms
cc UNLV Doctoral Advisory Committee

Appendix S

Courses Allowed for Cross Crediting

ENGLISH:

Annual
Business Communications
Business English
Drama
Filing
Graphic Communication
Journalism
Keyboarding
Medical Assistant
Office Practice
Visual/Media Communications
Word Processing

MATH:

Accounting
Advanced Woods and Metals
Auto Mechanics
Business Machines
Business Math
Business and Office Accounting I
Business and Office Accounting II
Carpentry
Commerical Foods
Computers
Computer Programming
Consumer Math
Data Processing
Diversified Occupations
Distributive Education
Drafting
Electronic Business Math
Electronic Calculating
Electronic Math Applications
Industrial Arts
Machine Shop
Math Applications
Occupational Math
Office Machines
Plastics Technology
Recordkeeping
Retail Math
Vocational Electronics

SCIENCE:

Agri-Business Management
Agriculture I and II
Agriculture III and IV
Agricultural Biology
Agricultural Science I
Agricultural Science II
Anatomy and Physiology
Animal Husbandry
Animal Science
Applied Mechanical Science Lab
Aviation Ground School
Basic Biology
Computer Orientation
Cosmetology
Electronics
Environmental Horticulture
Farm Management
Food Science
Forestry
Health Awareness
Health Occupations
Horticulture I and II
Horticulture III and IV
Housing/Interior Design
Marine Technology
Medical Assistant
Metal Fabrication
Metal Sculpture
Natural Resource Management
Nursing Assistant
Photography
Plant Science
Plastics Technology
Principles of Technology
Restuarant Foods
Row Crops
Tree Fruit Management

SOCIAL SCIENCES:

Adult Living
Advanced Clothing
Advanced R.O.T.C.
Basic Foods
Business Economics
Business Law
Child Development

Commercial Art
Consumer Economics
Consumer Skills
Economics
Family Relationships
Fast Foods
Fine Arts
Home Economics
Home and Family Life
Interior Design
Life Skills
Music
Occupational Skills
Peer Tutor
Personal Relations
Sociology of the Family

Appendix T

Courses Added to the School's Curriculum

ELECTIVES:

Driver's Education
Lifetime Sports

FINE ARTS:

Art II
Ceramics
Commercial Art
Debate
Drama
Graphic Art
Jazz Choir
Photography
Speech
Swing Band

LANGUAGE ARTS:

Annual
Chinese
English
English II
English - 3rd Year
English - 4th Year
English Skills
French
French III
German V and VI
Japanese
Journalism
Language Arts 12 - Honors
Publications
Remedial English
Remedial Reading
Spanish
Spanish V and VI
Study Skills
Writing Technology

MATH:

Agricultural Math
Algebra
Calculus
Electronic Math Calculations
Geometry
Math (third year)
Math Applications
Pre-Algebra
Pre-Calculus
Senior Math
Trigonometry

SCIENCE:

Advanced Horticulture
Botany
Chemistry
Chemistry II
Computer Science
Consumer Chemistry
Earth Science
Fitness and Food
General Science
Horticulture
Introduction to Physical Science
Marine Biology
Physical Science
Physics
Principles of Technology
Science
Science Projects
Senior Science
Wildlife Studies

SOCIAL SCIENCES:

Child Development/Family Relations
Civics
Current Events
Economics
Geography
Global Studies
Government
History
Leadership
Northwest History
Pacific Rim History

Political Science
Positive Image
Psychology
Senior History
Social Studies
Sociology
U.S. History
World History

VOCATIONAL EDUCATION:

Accounting
Advanced Computer Programming
Beginning Shop
Business Communications
Business Education
Business Law
Career Education
Computer Aided Design
Computer Electronics
Computer Literacy
Computer Programming
Construction Technology
Consumer Education
Distributive Education
Diversified Occupations
Electronic Technology
Exploring Childhood
Fashion Merchandising
Fish and Wildlife Management
Forestry
Home and Family Life
Home Economics II
Information Processing
Introduction to Computers
Keyboarding
Line Stock Evaluation
Marketing
Metals
Microcomputer Applications/Processing
Office Procedures/Applications
Small Gas Engines
Software Applications
Technical Education
Travel and Tourism
Typing
Word Processing